SONY ®

COMMUNICATION SYSTEM

PCS-1
PCS-1P

SYSTEM INTEGRATION MANUAL
1st Edition (Version 2.2 and later)

⚠ 警告

このマニュアルは，サービス専用です。
お客様が，このマニュアルに記載された設置や保守，点検，修理などを行うと感電や火災，人身事故につながることがあります。
危険をさけるため，サービストレーニングを受けた技術者のみご使用ください。

⚠ WARNING

This manual is intended for qualified service personnel only.
To reduce the risk of electric shock, fire or injury, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so. Refer all servicing to qualified service personnel.

⚠ WARNUNG

Die Anleitung ist nur für qualifiziertes Fachpersonal bestimmt.
Alle Wartungsarbeiten dürfen nur von qualifiziertem Fachpersonal ausgeführt werden. Um die Gefahr eines elektrischen Schlages, Feuergefahr und Verletzungen zu vermeiden, sind bei Wartungsarbeiten strikt die Angaben in der Anleitung zu befolgen. Andere als die angegeben Wartungsarbeiten dürfen nur von Personen ausgeführt werden, die eine spezielle Befähigung dazu besitzen.

⚠ AVERTISSEMENT

Ce manual est destiné uniquement aux personnes compétentes en charge de l'entretien. Afin de réduire les risques de décharge électrique, d'incendie ou de blessure n'effectuer que les réparations indiquées dans le mode d'emploi à moins d'être qualifié pour en effectuer d'autres. Pour toute réparation faire appel à une personne compétente uniquement.

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Section 1
Installation

1-1. Caution on Installation

1-1-1. Lay Out the Videoconferencing Room

Arrange it in consideration of the space of a camera and microphone when laying out the videoconferencing room.

Camera Range

     represents the shooting area of the camera when the zoom has been extended fully.   indicates the shooting area of the camera when the left/right angling function is fully utilized. Use the measurements below as a guide for the layout of your videoconference room.

Top view (horizontal range at maximum zoom-out)
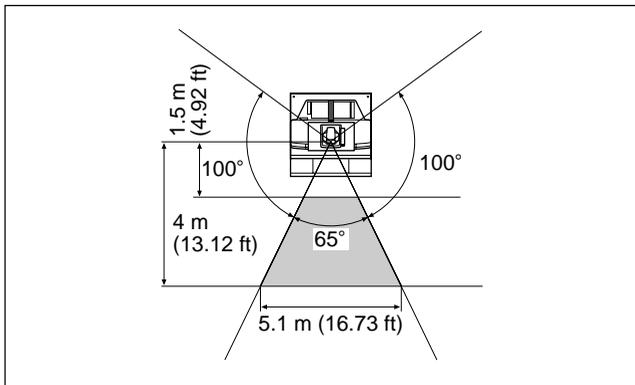
Side view (vertical range at maximum zoom-out)
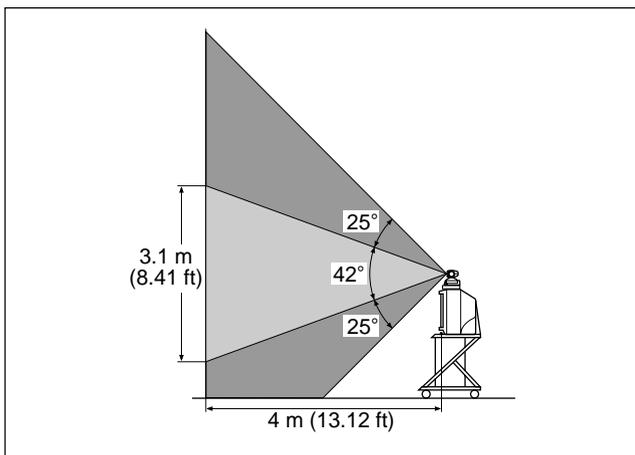
Highly directional range of microphone

The ideal directional range of a microphone is shown below. The numeric value is a rough standard.
Use the value as the reference of the videoconferencing room used.

1: For internal microphone

90°

2 m
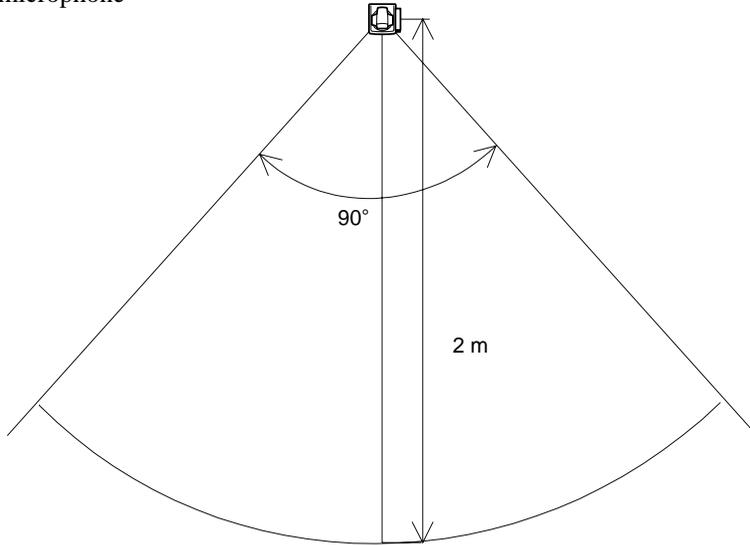
2: For extension microphone (PCS-A300)

0.5 to 1 m

120°
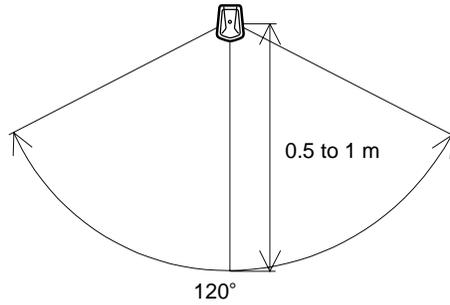
3: For extension microphone (PCS-A1)

0.5 to 1.2 m
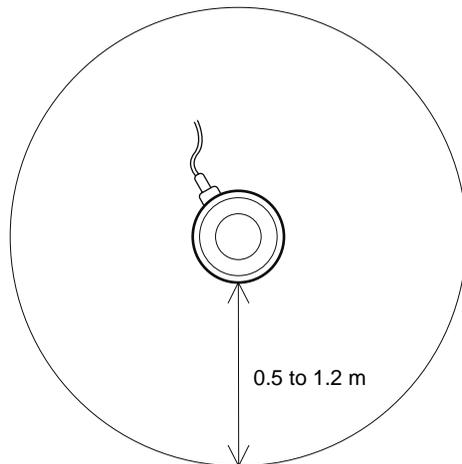
The microphone built in the PCS-C1/C1P Camera Unit is assumed to be used to conduct a conference among about three participants. You can connect the optional PCS-A1 or PCS-A300 microphone to the System, allowing more persons to participate in the conference.

Microphone layout examples

Microphone built in the PCS-1/1P

PCS-1/1P

PCS-A300 microphones

PCS-A300

PCS-1/1P

PCS-A1 microphones

PCS-A1

PCS-1/1P
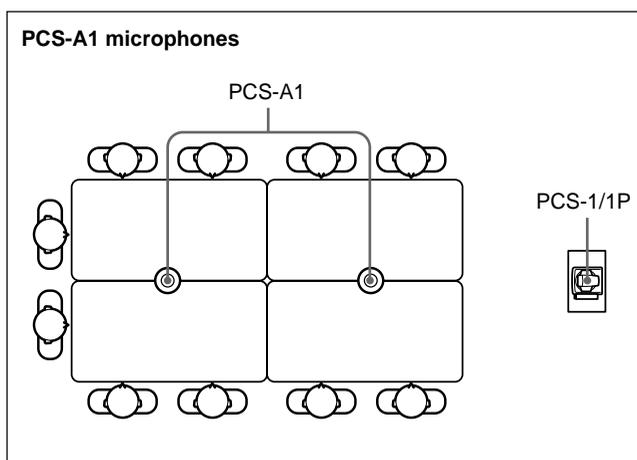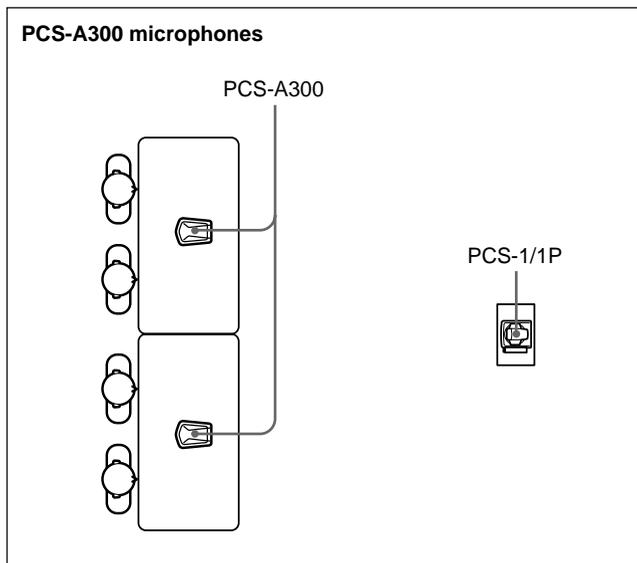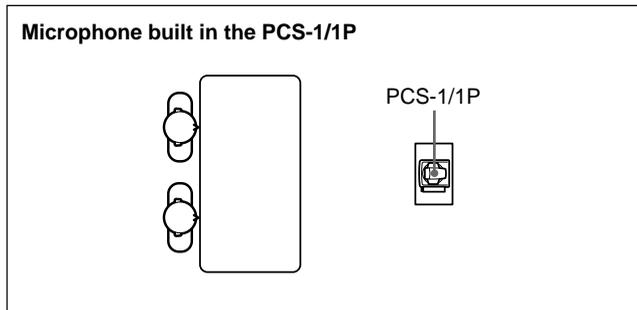
Notes on installation of the microphones

· Install microphone about 50 cm away from the participants.
· Install the speakers behind the microphones.
· Place the microphone in a quiet, echo-free location.
· Install microphones away from equipment that may cause noise.
· Avoid covering a microphone with paper, etc., or moving it. If you do either, extreme noise and echo may be heard temporarily by the remote party. In this case, wait until the echo disappears.

Installation of document stand

a. Adjust the direction of an infrared light emitter.
    Install so that the infrared light emitter of the document stand is linear in direction with the infrared
    photosensor of PCS-1/1P when the video signal input to a document stand is transmitted to PCS-1/1P
    using an infrared video transmission function. The range in which infrared rays reach is a maximum
    of about 5 m.
    Connect it with PCS-1/1P using a MONITOR OUT terminal when the infrared light emitter is used in
    excess of about 5 m.

PCS-1/1P

Infrared rays

Infrared photosensor

Document stand

Infrared light emitter

The blue line in the light emitter indicates the direction of infrared rays.

◁ : Adjustment in vertical direction

◀ : Adjustment in horizontal direction
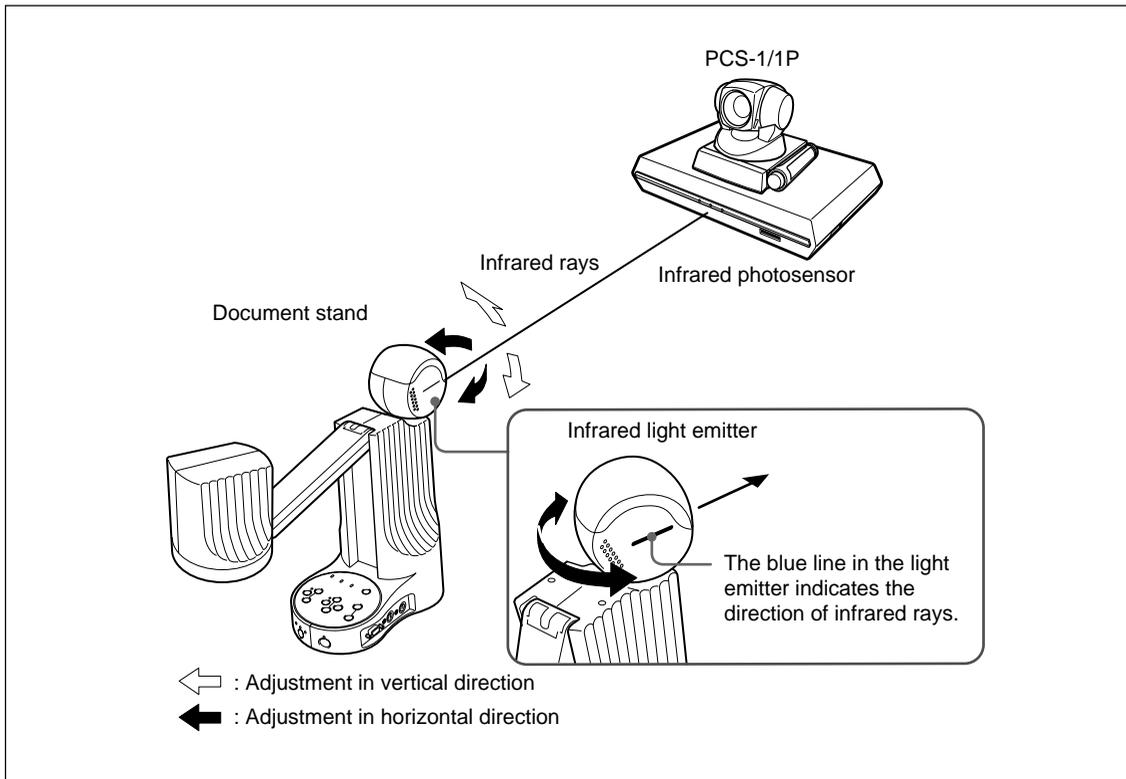
b. Installation range (Reference)
   If an image is disturbed in the range shown below, bring it near PCS-1/1P with the infrared light emitter of a documents stand turned toward PCS-1/1P.
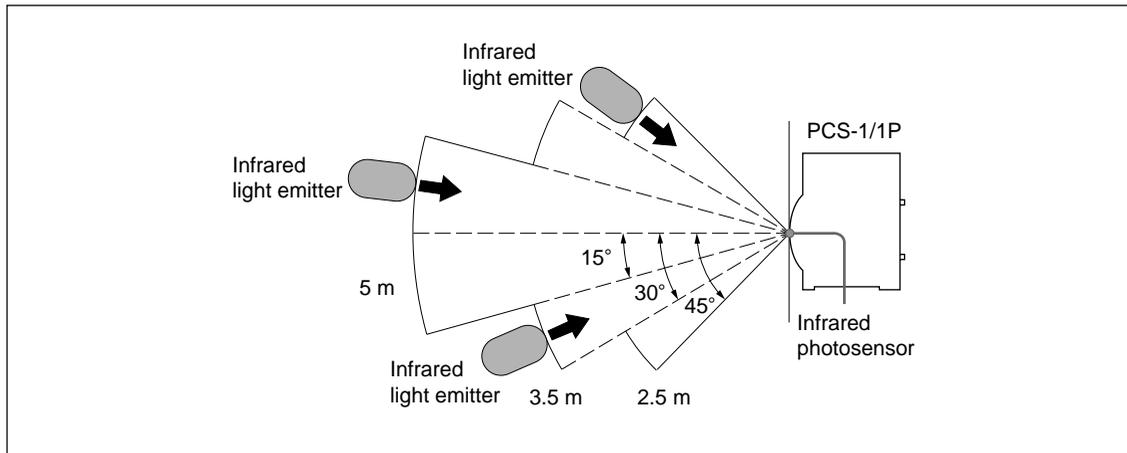
Notes

・ Install so that the infrared light emitter of a document stand is linear in direction with the infrared photosensor of PCS-1/1P. Do not put an object that interrupts transmission. When the direction of the infrared light emitter is shifted by five degrees or more, normal reception cannot be carried out, that is, an image is disturbed or stands still.

・ Multiple document stands cannot be used at the same time. Infrared rays interfere and any signal cannot be received.

・ The resolution of an image deteriorates when a video signal is transmitted using an infrared video transmission function. Connect the infrared light emitter with PCS-1/1P using a MONITOR OUT terminal when you do not want to deteriorate the resolution.

・ Connect the infrared light emitter with PCS-1/1P using a MONITOR OUT terminal when an infrared video transmission function cannot be used due to the situation of a videoconferencing room.

・ An image may be disturbed when other infrared light emitters are used or when a remote controller is used near the photosensor. Stop the use of other infrared light emitters or connect them with PCS-1/1P using a MONITOR OUT terminal.

1-1-2. Operating Environment

Layout Considerations

· Avoid having large, moving objects, especially people, behind the participants, as the quality of the picture transmitted to the remote party will deteriorate.
· Do not seat participants in front of a wall with fine stripe patterns.
· Choose a room where echo will not occur.
· Do not install the system near noise sources such as air conditioners or copy machines.
· Avoid placing the system in a room where there are the speakers used for an in-house broadcasting system.

Lighting Considerations

Do not point the camera toward a window where sunlight comes in as back lighting may decrease the contrast. If it is necessary, cover the window with a thick curtain.
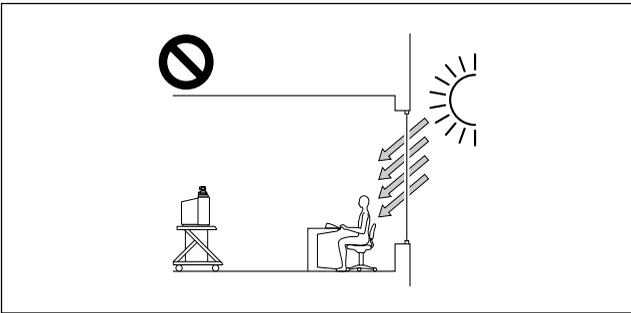
Adjust room lighting so that it falls on the participants. Avoid direct light on the TV monitor. Light intensity on faces should be about 300 lux or more.
If an inverter type or brightness-adjustable type of fluorescent lamp is used, the sensitivity of the Remote Commander may deteriorate.
Installing the Communication Terminal and Camera
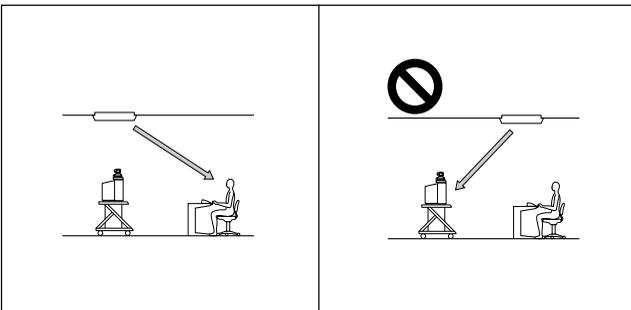
1-2. Flowchart of Installation

```
┌─────────────────────────────┐
│        Place used           │      <Refer to "1-1. Caution on Installation" on page 1-1.>
└─────────────────────────────┘
              │
              ▼
┌─────────────────────────────┐
│         Unpacking           │
└─────────────────────────────┘
              │
              ▼
┌─────────────────────────────┐
│  Check of supplied accessories │
└─────────────────────────────┘
              │
              ▼
┌─────────────────────────────┐
│  Power and cable connection, and │  <Refer to "1-3. System Connections" on page 1-8.>
│  preparation                │
└─────────────────────────────┘
              │
              ▼
┌─────────────────────────────┐
│  Start the power of the system and │  <Refer to "1-4. Initialization" on page 1-10.>
│  initialize.                │
└─────────────────────────────┘
              │
              ▼
┌─────────────────────────────┐
│  Initialize the related block.  │  <"1-5. System Setting" on page 1-17.>
└─────────────────────────────┘
              │
              ▼
┌─────────────────────────────┐
│           End               │
└─────────────────────────────┘
```
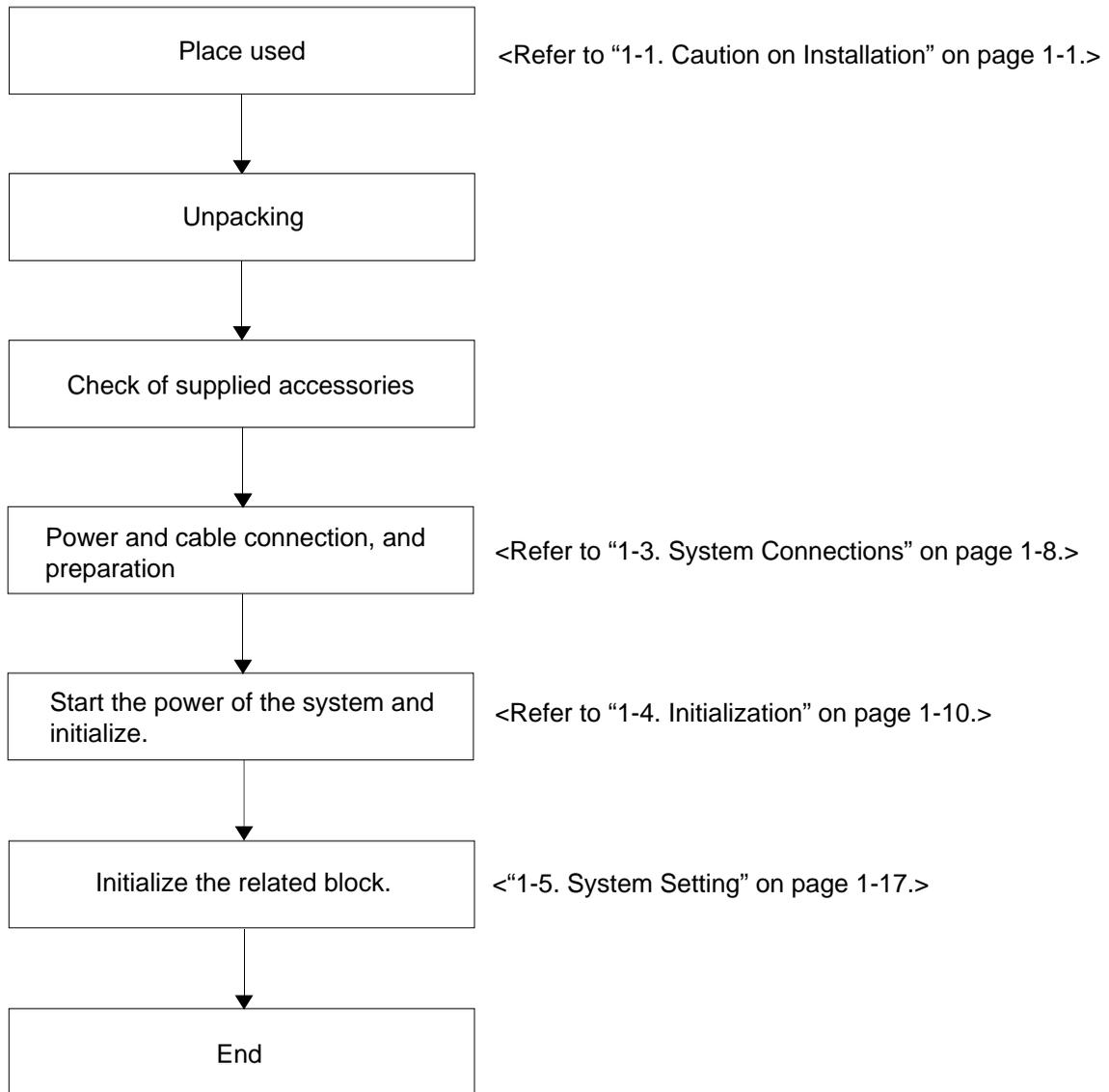
1-3. System Connections

This section describes the typical system connections.

Notes

- Be sure to turn off all the equipment before making any connections.
- Do not connect/disconnect the camera cable with the power on. Doing so may damage the Camera Unit or Communication Terminal.
- For safety, do not connect the 100BASE-TX/10BASE-T connector to a network that applies an excess voltage via the 100BASE-TX/10BASE-T connector

1-3-1. When Used in LAN (100BASE-TX/10BASE-T)
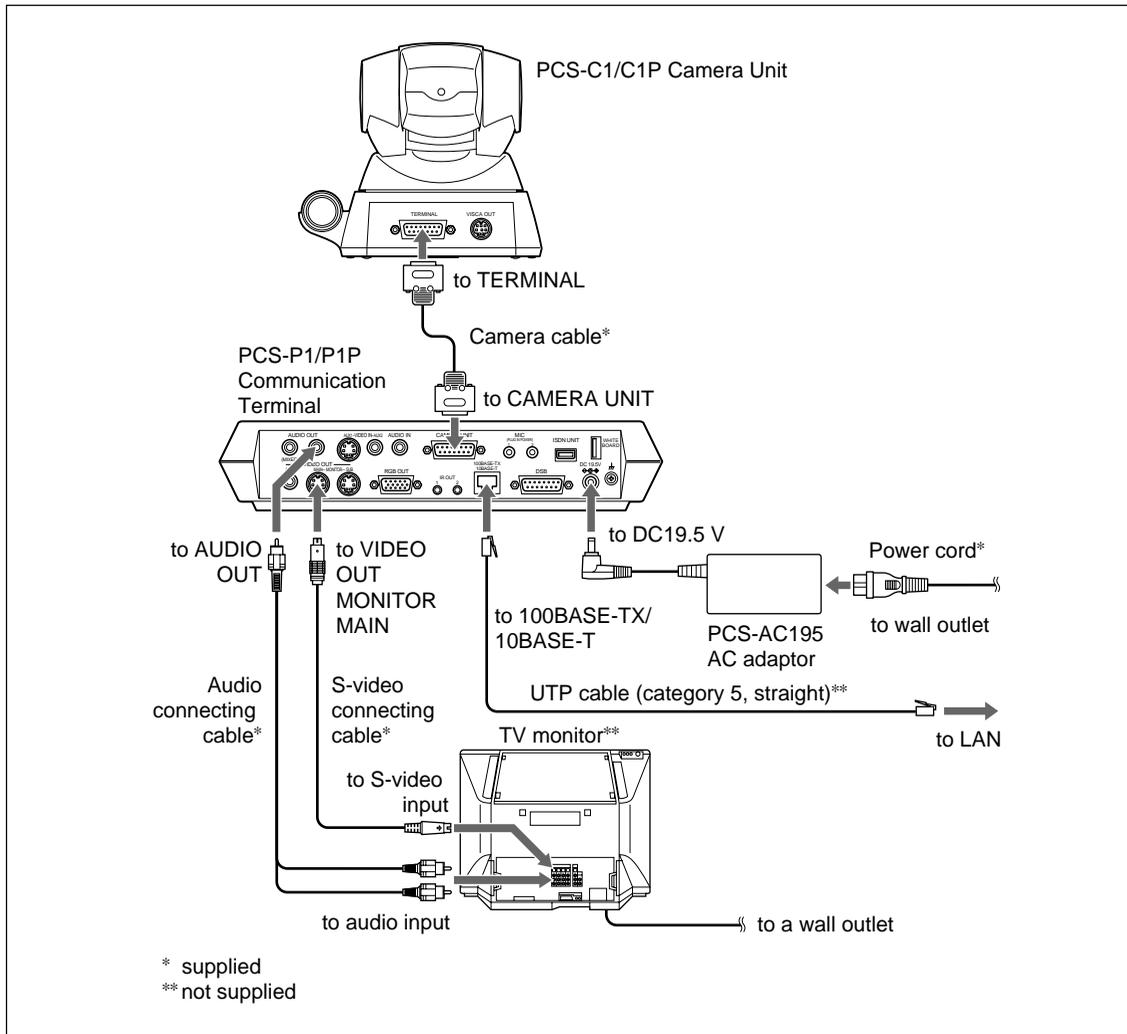
1-3-2. When Used in ISDN

Note

Do not connect/disconnect the camera cable or the interface cable with the power on. Doing so may damage the Camera Unit, Communication Terminal or ISDN Unit.

PCS-C1/C1P Camera Unit

to TERMINAL

PCS-P1/P1P Communication Terminal

Camera cable*

to CAMERA UNIT

to AUDIO OUT

to VIDEO OUT MONITOR MAIN

to ISDN UNIT

to DC19.5 V

Power cord*

to a wall outlet

PCS-AC195 AC adaptor

Interface cable (supplied with the PCS-B768)

to TERMINAL

Front

Audio connecting cable*

S-video connecting cable*

PCS-B768 ISDN Unit**

to ISDN 1-6

to ISDN

ISDN modular cable**

TV monitor**

to S-video input

to audio input

to a wall outlet

* supplied
** not supplied

1-4. Initialization

1-4-1. Inserting Batteries into the Remote Commander

Most of the operations with the Video Communication System can be controlled with the supplied Remote Commander.

1. Remove the battery compartment cover.
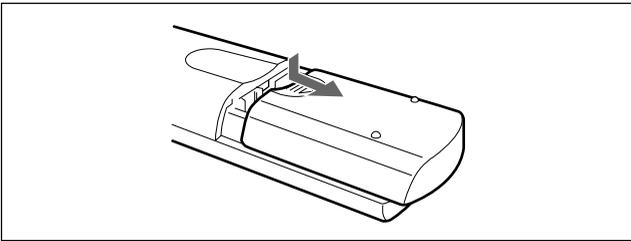
2. Insert two size AA (R6) batteries (supplied) with correct polarities into the battery compartment.
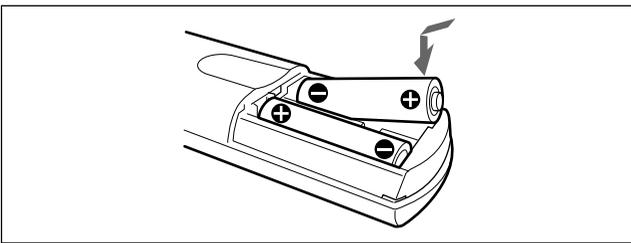
Note

Be sure to insert the batteries − side first. Inserting them forcibly + side first may damage the insulated film covering the batteries and cause a short circuit.

3. Replace the cover.

Notes

Battery life

When the Remote Commander does not function properly, replace both the batteries with new ones.

Notes on batteries

· To avoid damage from possible battery leakage or corrosion, observe the following:
· Make sure to insert the batteries with the polarities in the correct direction.
· Do not mix old and new batteries, or different types of batteries.
· Do not attempt to charge the batteries.
· If you do not intend to use the Remote Commander for a long period of time, remove the batteries.
· If battery leakage occurs, clean the battery compartment and replace all the batteries with new ones.

1-4-2. Turning On/Off the TV Monitor Together With the Communication Terminal

If you use a Sony TV, insert the IR repeater under the remote sensor of the TV. Once you set the IR repeater, the TV will turn on or go to standby together with the Communication Terminal when you press the I/O button on the supplied Remote Commander.
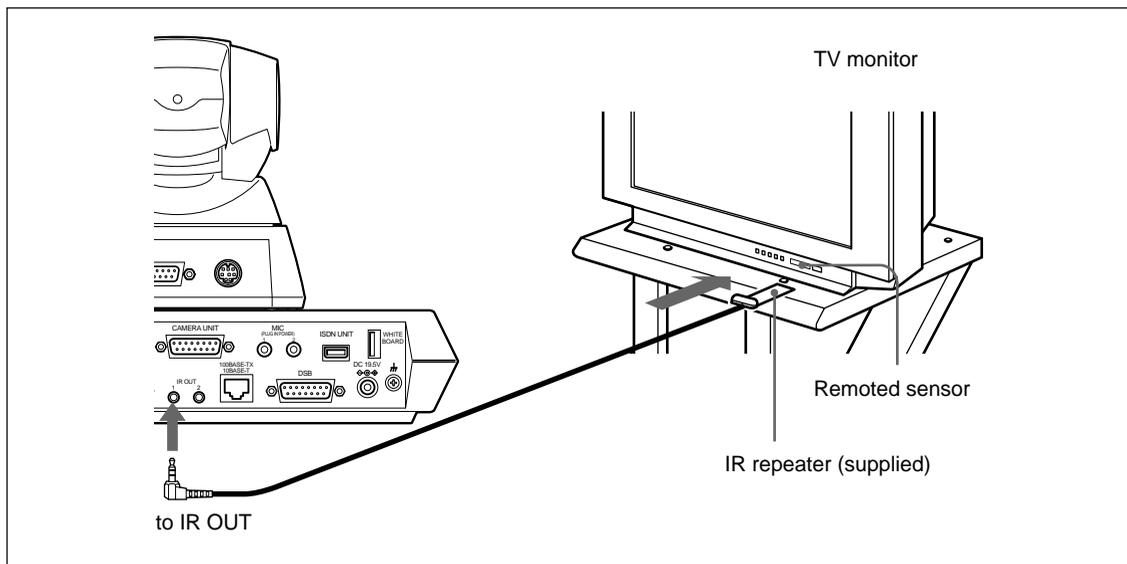
Note

If the TV monitor is not turned on by pressing the I/O button on the Remote Commander, change the "IR Repeater Mode" setting in the General Setup menu.

For details on the "IR Repeater Mode" setting, see "General Setup Menu" on page 1-18.

1-4-3. Adjust the Volume of a Monitor Television

Adjust the television side after the volume is adjusted on the PCS-1/1P side.

1. Press the volume/bright button of a remote controller and adjust so that the volume adjustment bar is in the center position
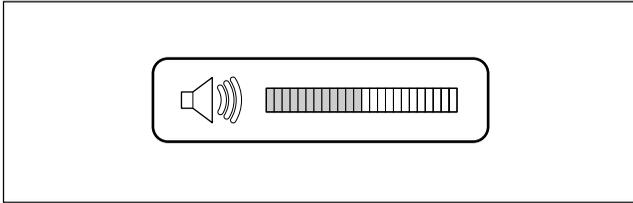
2. Adjust the volume of a monitor television.
    Set to the volume in which the remote voice can be heard well.
    After adjustment is completed, adjust the volume on the PCS-1/1P side.

1-4-4. Installing the Communication Terminal and Camera

You can fix the Communication Terminal or the Camera to your chosen place of installation using the supplied Velcro.

1. Stick the supplied Velcro to the bottom of the Communication Terminal or Camera.

Bottom of the Communication Terminal

Bottom of the Camera Unit
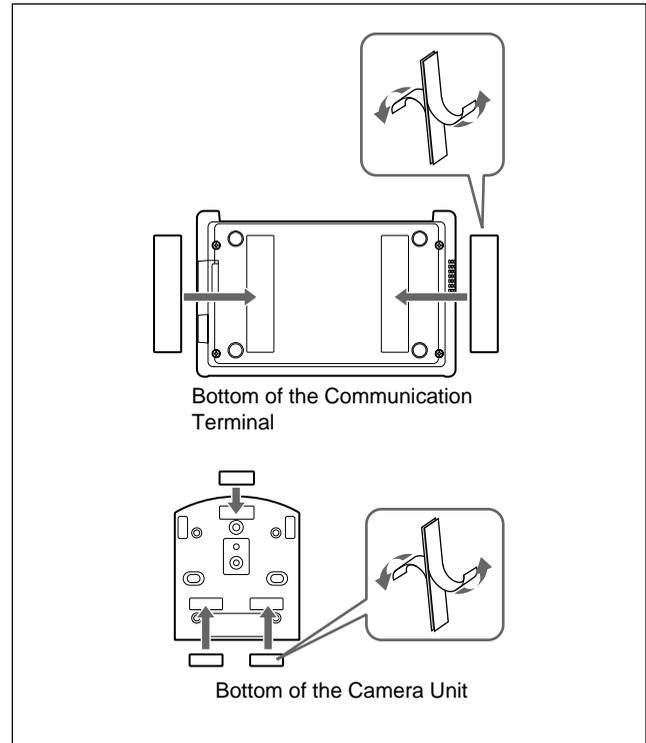
2. Stick another piece of Velcro to the installation place.
3. Install the Communication Terminal or the Camera on the installation place by securing the two pieces of Velcro.

1-4-5. Turning On

1. Turn on the TV monitor.
   If the IR repeater is installed in the TV monitor, set the TV monitor to standby mode. The TV monitor will turn on simultaneously when the Communication Terminal is turned on.
2. Turn on the power of any other equipment to be used for the videoconference.
3. Set the power switch on the right side of the Communication Terminal to the on position (I).

POWER indicators
(Light in green.)

Power switch
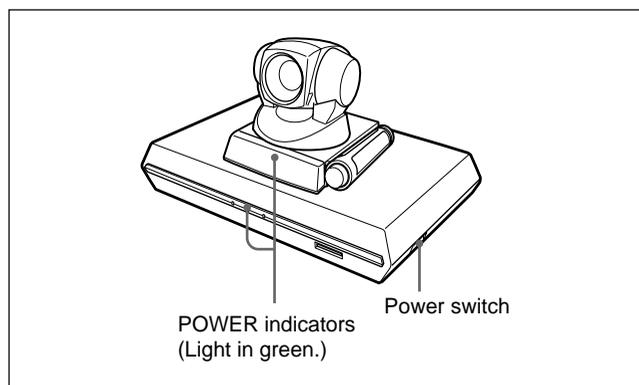
The Communication Terminal turns on after a while. Three indicators on the front of the Communication Terminal and the POWER indicator on the camera light, then only the POWER indicators on both units remain on in green. The launcher menu will appear on the monitor screen and the picture shot by the local camera will also appear in the launcher menu.

Launcher menu

SONY

Connect

Phone Book

Dial

Menu

○ Show Help

Angle Adj.

IP:0.0.0.0   ISDN:012345678912
Video:Main   Audio:MIC(INT)+AUX
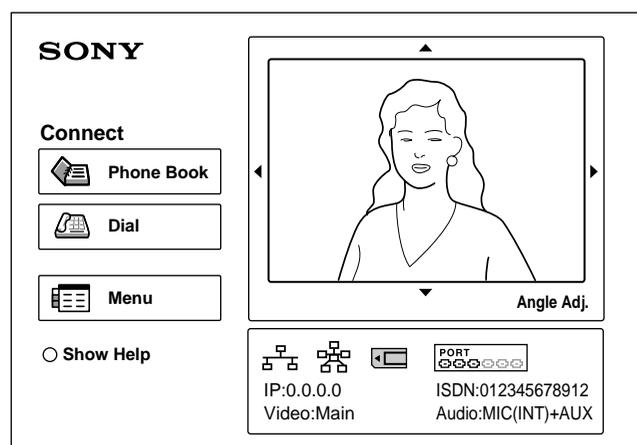
Notes

- After the power is turned on, the camera moves automatically for trial operation. Be careful not to catch your finger.
- If you use force to prevent the camera moving, it may not resume moving and not output a signal to the Communication Terminal. In this case, turn off the Terminal, and turn it on again.
- When you turn on the power of the Communication Terminal for the first time after installation, the setup wizard will appear after the self-diagnosis is completed. Set up your system following the wizard.
- For setups using the wizard, see "Setting Up the System for the First Time - Initial Setup Wizard" on page 1-14.

Standby Mode Function

To save power the Communication Terminal will enter standby mode if you do not operate it for a specified period of time.
When the Communication Terminal is in standby mode, the POWER indicator lights in orange. Once the Communication Terminal receives a call, the standby mode is automatically released.

To release the standby mode

Press the I/O button on the Remote Commander.

To specify the standby time

Specify the time that you want the system to remain on before entering into standby mode (1 to 99 minutes) using "Standby Time" in the General Setup menu. If you do not want the system to enter the standby mode, set "Standby Mode" in the General Setup menu to "Off".
For the "Standby Time" and "Standby Mode" settings, see "General Setup Menu" on page 1-18.

Notes

- The POWER indicator on the camera goes off when the system enters standby mode.
- If you use a Sony TV monitor with the IR repeater installed under the remote sensor, the TV monitor will enter standby mode together with the Communication Terminal.

1-4-6. When the power is first turned on after installation

When the power is first turned on after installation, the wizard for initialization is displayed if self-diagnosis is completed. Register according to the wizard.
The items set according to the wizard can also be later changed on the menu screen.

Note
The wizard for initialization is also displayed when ISDN unit PCS-B384 or PCS-B768 is newly installed after system installation. Similarly, register according to the wizard in this case.

1. Press the ↑ and ↓ buttons of a remote controller and select the language displayed in a menu or message.
   Language:
   You can select the desired language from English, French, German, Japanese, Spanish, Italian, Simplified Chinese, PORT (Portuguese), Traditional Chinese, and Korean*.
   ＊ Korean is added by upgrading.
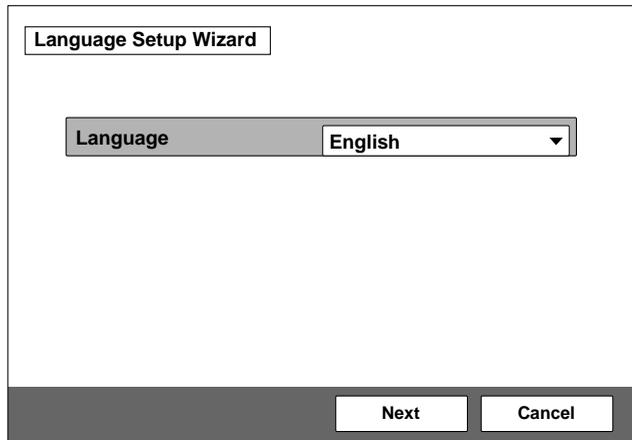
```
┌─────────────────────────────────────────┐
│ ┌─────────────────────────┐             │
│ │ Language Setup Wizard   │             │
│ └─────────────────────────┘             │
│                                          │
│   ┌─────────────┬──────────────────┐    │
│   │ Language    │ English       ▼ │    │
│   └─────────────┴──────────────────┘    │
│                                          │
│                                          │
│                                          │
│                        ┌──────┬────────┐ │
│                        │ Next │ Cancel │ │
│                        └──────┴────────┘ │
└─────────────────────────────────────────┘
```

2. Press the ↑, ↓, ←, and → buttons of a remote controller and click the "Next" button. Press the Enter button.
   The monitor setting wizard is displayed.
   Note
   The monitor setting wizard is set when two or more monitors are connected to this unit. When only one monitor television is connected, select "Next" and proceed to step 5.

3. Set a monitor that outputs a signal.
   Note
   Notice that any menu screen is not displayed on monitors other than the set monitor when "Monitor output" is set.

```
┌─────────────────────────────────────────┐
│ ┌─────────────────────┐                 │
│ │ ISDN Setup Wizard   │                 │
│ └─────────────────────┘                 │
│                                          │
│  ┌────────────────────┬───────────────┐ │
│  │ Country/Region     │ USA        ▼ │ │
│  ├────────────────────┼───────────────┤ │
│  │ Country/Region Code│ 1           │ │
│  ├────────────────────┼───────────────┤ │
│  │ Protocol           │ National ISDN▼│ │
│  └────────────────────┴───────────────┘ │
│                                          │
│  ┌──────────┐    ┌──────┐    ┌────────┐ │
│  │ Previous │    │ Next │    │ Cancel │ │
│  └──────────┘    └──────┘    └────────┘ │
└─────────────────────────────────────────┘
```

Dual monitor:
Sets whether to use one monitor for a motion picture monitor using a dual monitor function when two monitors are connected.
ON:
Set when using a dual monitor function. A still picture, computer picture, or whiteboard picture is displayed in the second monitor.
OFF:
Set when not using a dual monitor function.
Monitor output (or Sub-monitor output):
Select whether to output a signal to the monitor connected to which output terminal. The "Monitor output" is changed to "Sub-monitor output" when "Dual monitor" is set to "ON". In this case, select whether to output a signal to the sub-monitor (the second monitor) connected to which output terminal.
RGB of main unit:
Set when outputting a signal from the RGB OUT terminal of a communication terminal.
DSB RGB:
Set when outputting a signal from the RGB OUT terminal of a data solution box.
VIDEO of main unit:
Set when outputting a signal from the VIDEO OUT MONITOR MAIN or SUB terminal of a communication terminal.

4. Press the ↑, ↓, ←, and → buttons of a remote controller and click the "Next" button. Press the Enter button.
    The ISDN setting wizard is displayed when ISDN unit PCS-B384 or PCS-B768 is connected.
    The LAN setting wizard is displayed when an ISDN unit is not connected. Proceed to step 11.
5. Set the country, region, and protocol in which an ISDN line is used.
    Country/region:
    Select the country or region in which this unit is used. Select "Japan" when you use this unit in Japan.
    Country/region No.:
    Enter the country, region's national number, or region number in which this unit is used.
    Enter "81" when you use this unit in Japan. ("81" is automatically displayed when you select "Japan" in "Country/region".)
    Protocol:
    Select the protocol of the ISDN line used. Select "NTT" when you use this unit in Japan.
6. Press the ↑, ↓, ←, and → buttons of a remote controller and click the "Next" button. Press the Enter button.
7. Enter the telephone number of an ISDN line that this unit uses.
    For one line, enter the same number in columns A1 and A2.

Area code:
    Enter the area code.
    Do not enter the first "0" of an area code.
    Local code:
    Enter the local code.
    ┌──────┐
    │ **Note** │
    └──────┘
    Select a blank column and press the Enter button of a remote controller. The setting contents of an item in the above column are then copied.

┌──────┐
│ **Note** │
└──────┘
During use of ISDN unit PCS-B384, enter telephone numbers in columns B1 to C2 when two or three ISDN lines are connected.
During use of ISDN unit PCS-B768, enter telephone numbers in columns B1 to F2 when two to six ISDN lines are connected. To display columns D1 to F2, select "Next" and press the Enter button.
8. Press the ↑, ↓, ←, and → buttons of a remote controller and click the "Next" button. Press the Enter button.
9. Enter a sub-address.
    In the sub-address, only numeric characters are valid. For one line, enter the same number in columns A1 and A2.

┌──────┐
│ **Note** │
└──────┘
During use of ISDN unit PCS-B384, enter sub-addresses in columns B1 to C2 when two or three ISDN lines are connected.
During use of ISDN unit PCS-B768, enter sub-addresses in columns B1 to F2 when two to six ISDN lines are connected. To display columns D1 to F2, select "Next" and press the Enter button.
10. Press the ↑, ↓, ←, and → buttons of a remote controller and click the "Next" button. Press the Enter button.
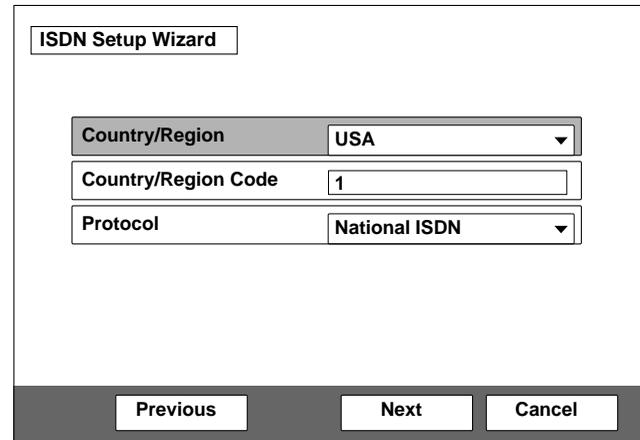   The LAN setting wizard is then displayed.
    ┌──────┐
    │ **Note** │
    └──────┘
    When you do not use LAN, select "Next" and display a confirmation message. After that, proceed to step 13.

11. Set the following items on LAN.

LAN Setup Wizard

DHCP Mode	**Auto** ▼
Host Name	
IP Address	. . .
Network Mask	. . .
Gateway Address	. . .
DNS Address	. . .

Previous   Next   Cancel

DHCP mode:
Sets DHCP (Dynamic Host Configuration Protocol).
AUTO:
Acquires an IP address, network mask, gateway
address, and DNS address automatically.
OFF:
Sets DHCP to "OFF". Enter an IP address, network
mask, gateway address, and DNS address when you
set DHCP to "OFF".
Host name:
Enter a host name.
IP address:
Enter the IP address of this unit.
Network mask:
Enter a network mask.
Gateway address:
Enter a default gateway address.
DNS address:
Enter a DNS (Domain Name System) server address.
Note
The automatically acquired IP address can be
confirmed in a launcher menu or information menu
when the "DHCP mode" is set to "AUTO".

Consult the network administrator when you cannot
understand the method of setting on LAN.
12. Press the ↑, ↓, ←, and → buttons of a remote
controller and click the "Next" button. Press the Enter
button.
A confirmation message is then displayed.

13. Press the ↑, ↓, ←, and → buttons of a remote
controller and click the "Save" button. Press the Enter
button.

Save
Previous   **Cancel**

The setting is then saved.

To stop the setting
Press the ↑, ↓, ←, and → buttons of a remote controller
and click the "Cancel" button. Press the Enter button.

To return to the preceding wizard
Press the ↑, ↓, ←, and → buttons of a remote controller
and click the "Return" button. Press the Enter button.

1-5. System Setting

The contents of a setting menu are shown in the table below.

Change the setting as required.

✳ For the ★-marked initial value, the value input in the initialization wizard (Section 1-4-6) is set.

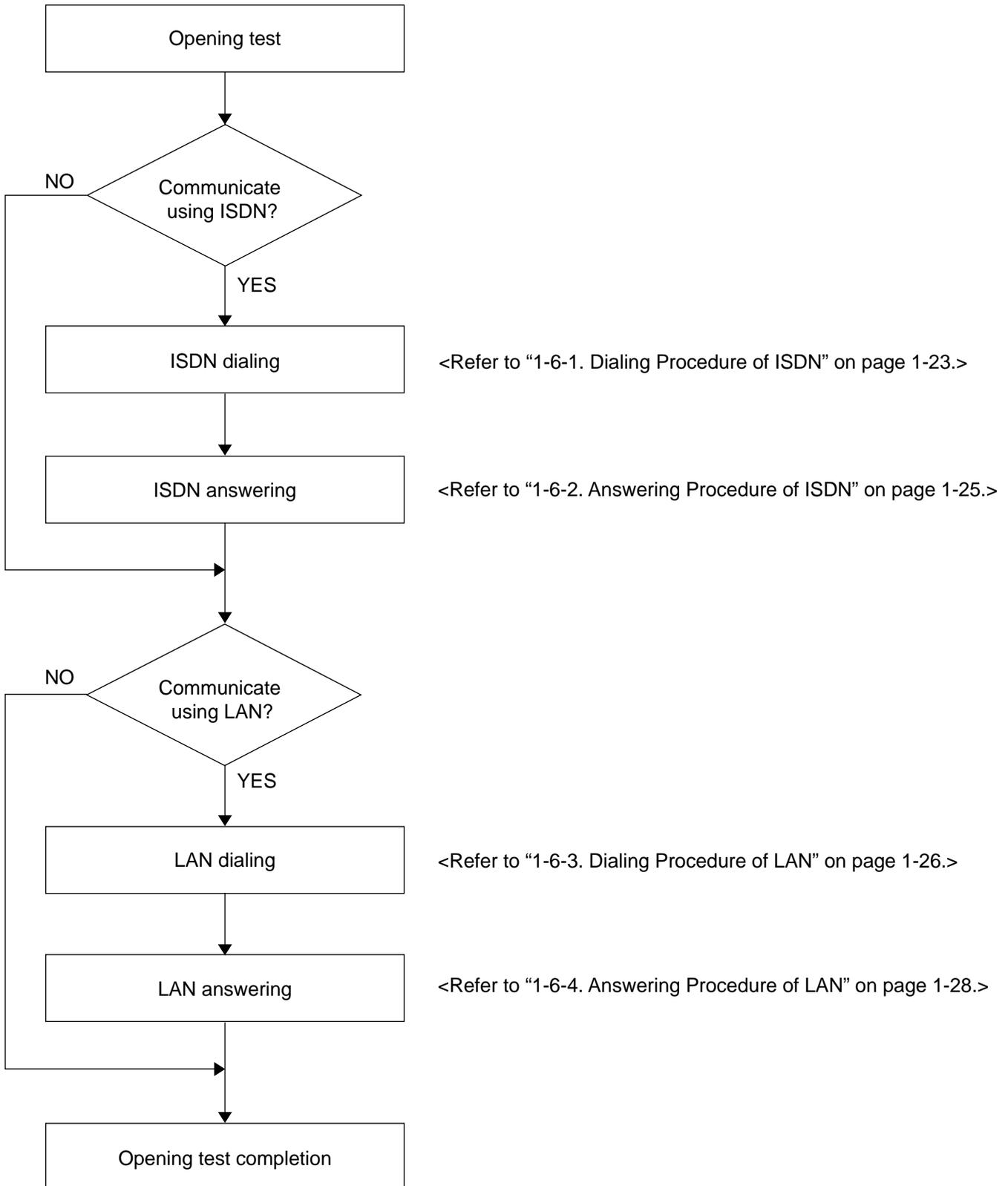| Item			Contents of setting	Initial value
Dial Setup	Page 1/4	Line I/F	Select the line interface [LAN, ISDN, or ISDN (Telephone)] used.	LAN
		Bonding	Select the bonding mode in which the remaining lines can also be connected by only dialing one line when multiple ISDN lines are used. Select "On" when connecting a line in the bonding mode. Select "Auto" when automatically adjusting a line to the remote party.	Auto
		Number of Lines	Select the number of ISDN lines used during dialing of ISDN from 1B (64K), 2B (128K), 3B (192K), 4B (256K), 5B (320K), 6B (384K), 8B (512K), or 12B (768K).	12B (768K)
		LAN Bandwidth	Set the bandwidth (bit rate) when communicating via a LAN line.	1024Kbps
		Prefix	Set the prefix number used when connecting using an ISDN line.	None
		Restrict	Select the transmission rate (Auto or 56K) when connecting using an ISDN line. In a few countries (America, etc.) and regions, two types of rates (64 Kbps and 56 Kbps) are used. Usually, select "Auto" as the transmission rate of ISDN.	Auto
	Page 2/4	Video Mode	Select a video coding system.	All capabilities
		Video Frame	Select the maximum number of video transmission frames (15 fps or 30 fps).	15fps
		Audio Mode	Select an audio coding system.	All capabilities
		Far End Camera Control	Set to "On" when controlling the camera on the remote party. Set to "Off" when not controlling it.	On
		T.120 Data	Set to "On" when making the data conference conforming to T.120 using NetMeeting. Set to "Off" when not making it.	Off
		H.239	Set to "On" when using the dual video presentation mode based on the H.239 standard. Set to "Off" when not using it.	On
	Page 3/4	Prefix -A/-B/-C	Set the prefix (dial number).	Blank
	Page 4/4	Telephone Mode	Select the voice compression system during voice meeting.	Auto
		More Options Enable	Set to "On" when you want to set the items in the dial setup menu for each dial list. Set to "Off" when you do not want.	Off
		User Name Input	Set to "On" when recording the user name in a communication log before communication. Set to "Off" when not recording it.	Off
Answer Setup	Page 1/2	Auto Answer	Select "Auto Answer" when automatically performing connection during reception of an answering call from the remote party. Select "Off" when confirming connection.	Auto Answer
		Number of Lines	Select the number of ISDN lines used during answering of ISDN from 1B (64K), 2B (128K), 3B (192K), 4B (256K), 5B (320K), 6B (384K), 8B (512K), or 12B (768K).	12B (768K)
		Restrict	Select the transmission rate (Auto or 56K) when connecting (answering) using an ISDN line. In a few countries (America, etc.) and regions, two types of rates (64 Kbps and 56 Kbps) are used. Usually, select "Auto" as the transmission rate of ISDN.	Auto
		LAN Bandwidth	Set the bandwidth (bit rate) when communicating (incoming) via a LAN line.	1024Kbps
		ISDN MSN	Select "On" when employing multiple subscriber numbers during connection (answering) using an ISDN line. Select "Off" when not employing them.	Off
	Page 2/2	Video Mode	Select a video coding system.	ALL
		Video Frame	Select the maximum number of video transmission frames (15 fps or 30 fps).	15fps
		Audio Mode	Select an audio coding system.	ALL
		Far End Camera Control	Set to "On" when controlling the camera on the remote party. Set to "Off" when not controlling it.	On
		T.120 Data	Set to "On" when making the data conference conforming to T.120 using NetMeeting. Set to "Off" when not making it.	Off
		H.239	Set to "On" when using the dual video presentation mode based on the H.239 standard. Set to "Off" when not using it.	On

Item			Contents of setting	Initial value
General Setup	Page 1/4	Terminal Name	Enter the terminal name to be notified to MCU.	PCS-1
		Dual Monitor	Set to "On" when using a dual monitor function with the two monitors connected.	Off★
		Monitor Output (Sub-Monitor Output)	Select whether a signal should be output to the monitor connected to which output terminal. When "Dual Monitor" is set to "On", the menu is changed to "Sub-Monitor Output". Select whether a signal should be output to the sub-monitor connected to which output terminal.	VIDEO OUT★
		Standby Mode	Set to "On" when using the standby mode. Set to "Off" when not using it.	Off
		Standby Time	Set the time (1 to 99 minutes) required until the unit is put into the standby mode when the standby mode is set to "On".	
		Time Display	Set to "On" when displaying the elapsed time in the upper-right position of the screen during the conference. Set to "Off" when not displaying it.	On
	Page 2/4	Clock Set	Set the current date and time.	
		Last Number Registration	Set to "On" when registering the remote user in the Phone Book after a conference is terminated. Set to "Off" when not registering it.	On
		T.120 PC Address	Enter the IP address of the computer used when the data conference conforming to T.120 is made using NetMeeting.	Blank
		Whiteboard Attachment	Select whether to attach the optional mimio Xi vertically or horizontally on the whiteboard.	Vertical
		Whiteboard Size	Select the size (height × width) of the whiteboard used.	3'0"×4'0"
		Whiteboard Measurement Size	Select whether to display the whiteboard size in inches or meters.	Inches
	Page 3/4	Language	Select the language of the menu and message displayed on the screen.	English★
		IR Repeater Mode	Select the mode for putting the monitor into the standby state or turning on the power when a Sony's monitor is used. Usually, set to "MODE 1".	MODE1
		Control by Far End	Set to "On" when receiving the camera control command from the remote party. Set to "Off" when not receiving it.	On
		Character Input Help	Select whether to display the balloon help appearing when entering characters or numeric characters.	On
		Memory Stick Format	Execute the format of the Memory Stick.	
	Page 4/4	Video Input Selection Name · Main · Object · AUX1 · AUX2	The input device names displayed in a launcher menu or video input select menu can be changed to arbitrary names, respectively.	All blanks
Audio Setup	Page 1/2	Input Select	Select the audio input (MIC, AUX, or MIC + AUX).	MIC
		Mic Selection	Select the microphone used (Internal, External, or DSB MIC).	Internal
		CTE	Select whether to use communication transducer CTE-600 and select the input terminal to be connected. Select "Off" when not using CTE-600. Select "AUX" when inputting to the AUDIO IN terminal of the main unit and select "DSB AUX IN" when inputting to the AUX IN terminal of a data solution box. ∗ When CTE-600 is set so that it is used, "Input Select", "Mic Select", and "Echo Canceller" are automatically determined and cannot be changed.	Off
		Echo Canceller	Select "Internal" when using the echo canceller of the main unit and select "External" when using an external echo canceller. Select "Off" when not using the echo canceller of the main unit.	Internal
		Lip Sync	Select "On" when using a lip sync function that synchronizes the lip motion and voice of a speaker. Select "Off" when not using it.	Off
		Recording Mute	Set to "On" when outputting a voice to the AUDIO OUT (MIXED) terminal. Set to "Off" when not outputting it.	On
	Page 2/2	Beep Sound	Set to "On" when generating a beep sound during pressing of a remote controller button. Set to "Off" when not generating it.	On
		Sound Effect	Set to "On" when generating an effect sound during system start up, conference start, conference end. Set to "Off" when not generating it.	On
		Dial Tone	Set to "On" when generating a ring-back tone during dialing or a busy tone during talking. Set to "Off" when not generating it.	On
		Ringer Tone	Set to "On" when generating a ringer tone during calling. Set to "Off" when not generating it.	On

Item			Contents of setting	Initial value
LAN Setup	Page 1/8	DHCP Mode	Set whether to use DHCP (Dynamic Host Configuration Protocol). Set to "Auto" when automatically acquiring an IP address, net mask, gateway address, and DNS address. Set to "Off" when not automatically acquiring them.	Off★
		Host Name	Set the host name of this unit.	Blank★
		IP Address	Set the IP address of this unit.	Blank★
		Network Mask	Set the network mask of this unit.	Blank★
		Gateway Address	Set a default gateway address.	Blank★
		DNS Address	Set a DNS (Domain Name System) server address.	Blank
	Page 2/8	Gatekeeper Mode	Set to "On" when using a gatekeeper and set to "Off" when not using it. Set to "Auto" when automatically searching a gatekeeper.	Off
		Gatekeeper Address	Set the IP address of a gatekeeper.	Blank
		User Alias	Set the user name (H.323 alias) registered in a gatekeeper.	Blank
		User Number	Set the user number (E.164 number) registered in a gatekeeper.	Blank
	Page 3/8	SNMP Mode	Set to "On" when enabling the service of an SNMP (Simple Network Management Protocol) agent. Set to "Off" when disabling it.	Off
		Trap Destination	Set the IP address of an SNMP manager that transmits a trap.	Blank
		Community	Set the community name that an SNMP manager manages. Usually, set to "Public".	Public
		Description	This is the description of this device. It has been entered as "Videoconference Device". Cannot be changed.	Videoconference Device
		Location	Set the place in which this unit is installed.	Blank
		Contact	Set the information on the administrator of this unit.	Blank
	Page 4/8	NAT Mode	Set to "On" when connecting this unit to the local network in which NAT (Network Address Translation) is used. Set to "Off" when not connecting it.	Off
		NAT Address	Set the IP address on the global side that NAT uses.	Blank
		Packet Resent Request	Set to "On" when requesting retransmission with the packets lost during communication. Set to "Off" when not requesting it.	On
		Adaptive Rate Control	Set to "On" when optimizing the LAN bandwidth. Set to "Off" when not optimizing it. ∗ This item is fixed to "On" when "Packet Retransmission Request" is "On".	On
		LAN Mode	Select the interface type and communication mode during LAN connection.	Auto Negotiation
	Page 5/8	Port Number Used	Select whether to fix the TCP port number and UDP port number. User setting: The port number that the user sets is used. Default value: The default port number is used. TCP port number 2253 and UDP port number 49152 are set.	Default
		TCP Port Number	Set the TCP port number when "Port Number Used" is "Custom".	2253
		UDP Port Number	Set the UDP port number when "Port Number Used" is "Custom".	49152
	Page 6/8	TOS	Select the definition of a TOS (Type of Service) field. Set to "Off" when not defining the TOS field. Select "IP Precedence" when defining in IP Precedence and select "Diffserve" when defining in Diffserve. ∗ For the items below, the display dynamically varies depending on the selection.	OFF
		During IP Precedence selection		
		IP Precedence	Enter IP Precedence values (0 to 7).	0
		Low Delay	Select low delay bit On/Off of TOS field.	Off
		High Throughput	Select high throughput bit On/Off of TOS field.	Off
		High Reliability	Select high reliability bit On/Off of TOS field.	Off
		Minimum Cost	Select minimum cost bit On/Off of TOS field.	Off
		During Diffserve selection		
		Diffserve	Enter Diffserve value (0 to 64).	0
	Page 7/8	PPPoE	Select PPPoE termination On/Off using this unit.	Off
		PPPoE User Name	Enter the PPPoE connection user name (account) acquired from a provider.	Blank
		PPPoE Password	Enter the PPPoE connection password acquired from a provider.	Blank
	Page 8/8	Fixed IP for PPPoE	Set to "On" when acquiring the PPPoE connection-fixed IP address. Set to "Off" when automatically acquiring for each session.	Off
		Fixed IP Address for PPPoE	Enter the fixed IP address acquired from a provider when "Fixed IP for PPPoE" is "On".	Blank
		PPPoE DNS	Select "Obtain automatically" when acquiring the IP address of the DNS server from the server during PPPoE connection. Select "Set" when the fixed IP address exists.	Obtain automatically
		Primary DNS	Enter the IP address of the primary DNS server when "PPPoE DNS" is "Set".	
		Secondary DNS	Enter the IP address of the secondary DNS server when "PPPoE DNS" is "Set".	

Item			Contents of setting	Initial value
Administrator Setup	Page 1/2	Administrator Password	Set the password for an administrator. The administrator can operate a setup menu and phone book menu.	Blank
		Superuser Password	Set the password for a super-user. The super-user can operate a phone book menu.	Blank
		Remote Access Password	Set the password when accessing through Web control.	Blank
		Web Monitor	Select whether to permit the state monitoring function (the updating of JPEG screen) via Web access.	On
	Page 2/2	Save Phone Book	Save the data in a phone book in a Memory Stick.	
		Load Phone Book	Load the phone book data saved in a Memory Stick to the main unit.	
		Auto Dialing	Select whether to use the automatic dialing function of a private phone book.	On
		Create Private Phone Book	Create a private phone book newly in a Memory Stick.	
		Delete Private Phone Book	Delete the private phone book created in a Memory Stick.	
		Copy to Private Phone Book	Copy the phone book data of the main unit to a Memory Stick as private phone book data.	
ISDN Setup	Page 1/7	Country/Region	Select the country and region in which this unit is used.	USA★
		Country/Region Code	Enter the country, region's national number, and region number in which this unit is used. ∗ The Country/Region No. is automatically set when it is uniquely determined by the selection of "Country/Region".	1★
		Protocol	Select the protocol of the ISDN line used.	National ISDN★
	Page 2/7	Area Code (A1 to C2)	Enter the area code of the ISDN line used. ∗ Do not enter the first "0" of an area code.	Blank★
		Local Number (A1 to C2)	Enter the telephone number (local number) of the ISDN line used.	Blank★
	Page 3/7	Area Code (D1 to F2)	Enter the area code of the ISDN line used. ∗ Do not enter the first "0" of an area code.	Blank★
		Local Number (D1 to F2)	Enter the terephone number (local number) of the ISDN line used.	Blank★
	Page 4/7	Sub Address (A1 to C2)	Enter the sub-addresses when registering them.	Blank★
	Page 5/7	Sub Address (D1 to F2)	Enter the sub-addresses when registering them.	Blank★
	Page 6/7	SPID (A1 to C2)	Enter the telephone numbers and the Auto SPID tab. ∗ This item is used only for customers in the U.S.A. and Canada.	Blank
	Page 7/7	SPID (D1 to F2)	Enter the telephone numbers and the Auto SPID tab. ∗ This item is used only for custormers in the U.S.A. and Canada.	Blank
Multipoint Setup ∗ Validated only when the optional software for a multipoint conference is installed.	Page 1/2	Multipoint Mode	Select "On" when this unit is used as the master unit (MCU) of a multipoint conference. Select "Off" when not making a multipoint conference.	Off
		Broadcast Mode	Select "Divide" when displaying the video in the connected terminals on the split screen. Select "Audio detect" when detecting the speaker position and transmitting the video in the terminal to all other terminals.	Split
		Number of Lines	Select the number of channels in the line used for connection at the first point during ISDN connection.	2B (128K)
		Total LAN Bandwidth	Select the whole bandwidth when making a multipoint conference during LAN connection.	1024Kbps
		Restrict	Select the communication network rate of ISDN. Select "Auto" when using a normal ISDN line. Select "56K" when connecting with the country or region in which the line rate per 1B is 56 Kbps.	Auto
	Page 2/2	Video Mode	Select the video system during multipoint conference.	ALL
		Audio Mode	Select the audio system during multipoint conference.	ALL
		Display Terminal Name	Select whether to display the terminal name of the connected terminal when a multipoint conference is terminated.	On
		Far End Camera Control	Select whether to control the camera on the remote party.	On
		Reject Answer	Select "On" when rejecting connection to the access from a remote party during multipoint conference. Select "Off" when permitting connection.	Off

Item			Contents of setting	Initial value
Machine Information (Information)	Page 1/1	Host Version	Displays the software version of the main unit.	
		ISDN UNIT Version	Displays the version of the connected ISDN unit (PCS-B384 or PCS-B768).	
		DSB Version	Displays the version of the connected data solution box (PCS-DSB1).	
		DSP Version	Displays the version of the built-in DSP for video and audio codec.	
		Software Option	Displays the installed MCU software.	
		Option I/F	Displays the connected optional device.	
		Host Name	Displays the host name of the main unit.	
		IP Address	Displays the IP address of the main unit.	
		MAC Address	Displays the MAC address of the main unit.	
		Serial Number	Displays the serial number of the main unit.	
Status			The communication state is displayed. Each page is displayed for each connected point.	
Encryption via LAN	Page 1/1	Encryption via LAN	Select whether to encrypt the data connected via LAN.	Off
		Encryption Password	Set the password when making an encryption conference.	Blank

1-6. Flowchart of Opening Test

```
                ┌─────────────────────────┐
                │      Opening test       │
                └─────────────────────────┘
                             │
                             ▼
                          ╱     ╲
        NO              ╱ Communicate ╲
      ◄───────────────  using ISDN?  
                          ╲         ╱
                            ╲     ╱
                             │
                            YES
                             │
                             ▼
                ┌─────────────────────────┐
                │      ISDN dialing       │        <Refer to "1-6-1. Dialing Procedure of ISDN" on page 1-23.>
                └─────────────────────────┘
                             │
                             ▼
                ┌─────────────────────────┐
                │     ISDN answering      │        <Refer to "1-6-2. Answering Procedure of ISDN" on page 1-25.>
                └─────────────────────────┘
                             │
                             ▼
                             │
                             ▼
                          ╱     ╲
        NO              ╱ Communicate ╲
      ◄───────────────  using LAN?  
                          ╲         ╱
                            ╲     ╱
                             │
                            YES
                             │
                             ▼
                ┌─────────────────────────┐
                │      LAN dialing        │        <Refer to "1-6-3. Dialing Procedure of LAN" on page 1-26.>
                └─────────────────────────┘
                             │
                             ▼
                ┌─────────────────────────┐
                │     LAN answering       │        <Refer to "1-6-4. Answering Procedure of LAN" on page 1-28.>
                └─────────────────────────┘
                             │
                             ▼
                ┌─────────────────────────┐
                │ Opening test completion │
                └─────────────────────────┘
```
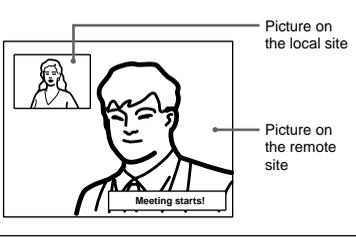
1-6-1. Dialing Procedure of ISDN

Note

It is required that the line number used in the other end is entered in the area code and local number of the ISDN setup menu of the other end.
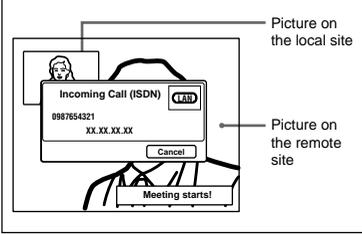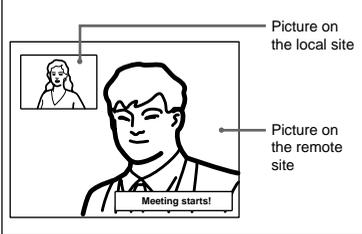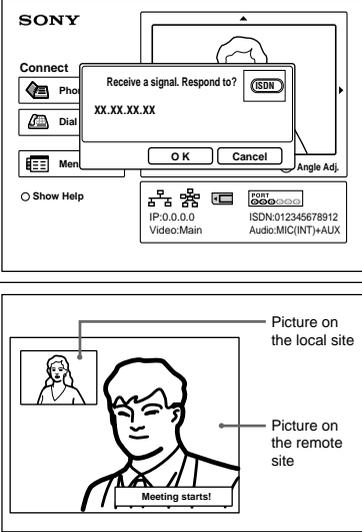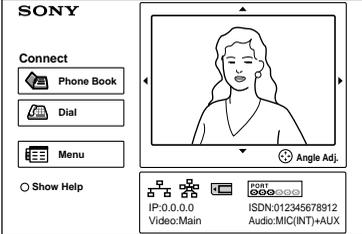
Item	Operation	Screen	Remarks (Confirmation item)
1.	Select "Dial" from the launcher menu using ↑, ↓, ←, and → buttons of a remote controller and press the ENTER button, or press the CONNECT/DISCONNECT (☎/☎) button of a remote controller.		The dial menu is displayed.
2.	Select "Line I/F" using ↑, ↓, ←, and → buttons of a remote controller and press the ENTER button. Then select "ISDN" from the set item using ↑ or ↓ button and press the ENTER button.		
3.	Select line input column A using ↑, ↓, ←, and → buttons of a remote controller and press the ENTER button. Then, enter the remote line number.		
4.	Select "Number of lines" using ↑, ↓, ←, and → buttons of a remote controller and press the ENTER button. Select the number of connected lines from the set item using ↑ or ↓ button and press the ENTER button.		
5.	Select "Dial" at the bottom of a menu using ↑, ↓, ←, and → buttons of a remote controller and press the ENTER button, or press the CONNECT/DISCONNECT (☎/☎) of a remote controller.		"Dialing (ISDN)" is displayed on the screen, and the ON LINE lamp (blue) blinks.

Item	Operation	Screen	Remarks (Confirmation item)
6.	The remote party makes a response.	Picture on the local site / Picture on the remote site / Meeting starts!	The ON LINE indicator (blue) lights. "Meeting starts!" is displayed, and the remote voice and image are heard and displayed from the monitor television.
7.	Disconnection Press the CONNECT/DISCONNECT (☎/☎) button of a remote controller. A confirmation message on whether to disconnect a line is then displayed. Select "OK" using a ← or → button of a remote controller and press the ENTER button, or press the CONNECT/DISCONNECT (☎/☎) button of a remote controller again.		The line is disconnected and the conference is terminated. The current display returns to a launcher menu.

1-6-2. Answering Procedure of ISDN

Note

It is required that the line number used in this unit is entered in the area code and local number of the
ISDN setup menu before receiving a signal from the other end.

Item	Operation	Screen	Remarks (Confirmation item)
1.	Calling from the remote party		A ringer tone occurs. "Incoming Call" is displayed on the screen.
2.	<For Auto Answer>		During connection, "Meeting starts!" is displayed, and the remote voice and image are heard and displayed from the monitor television.
	<For Manual Answer>		A ringer tone occurs and the guide screen for incoming appears on the screen. Select "OK" using a ← or → button of a remote controller and press the ENTER button.
			During connection, "Meeting starts!" is displayed, and the remote voice and image are heard and displayed from the monitor television.
3.	Remote disconnection		The message of conference termination is displayed on the screen and the current display returns to a launcher menu.

1-6-3. Dialing Procedure of LAN

Item	Operation	Screen	Remarks (Confirmation item)
1.	Select "Dial" from the launcher menu using ↑, ↓, ←, and → buttons of a remote controller and press the ENTER button, or press the CONNECT/DISCONNECT (☎/☎) button of a remote controller.		The dial menu is displayed.
2.	Select "Line I/F" using ↑, ↓, ←, and → buttons of a remote controller and press the ENTER button. Then select "LAN from the set item using a ↑ or ↓ button and press the ENTER button.		
3.	Select an IP address input column using ↑, ↓, ←, and → buttons of a remote controller and press the ENTER button. Then, enter the remote IP address. **Notes** • Enter the host name and domain name (example: host.domain) in an IP address input column when a DNS server is used. Enter the user name or user number, registered in the remote LAN setup menu, in an IP address input column when a gate keeper is used. • To enter the delimitation of an IP address, press the → button or # button.		
4.	Select "LAN Bandwidth" using ↑, ↓, ←, and → buttons of a remote controller and press the ENTER button. Select the Bandwidth used from the set item using a ↑ or ↓ button and press the ENTER button.		During connection, "Meeting starts!" is displayed, and the remote voice and image are heard and displayed from the monitor television.
5.	Select "Dial" at the bottom of a menu using ↑, ↓, ←, and → buttons of a remote controller and press the ENTER button, or press the CONNECT/DISCONNECT (☎/☎) of a remote controller.		"Dialing (LAN)" is displayed on the screen.
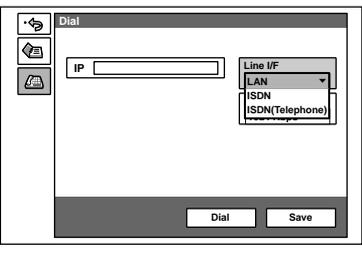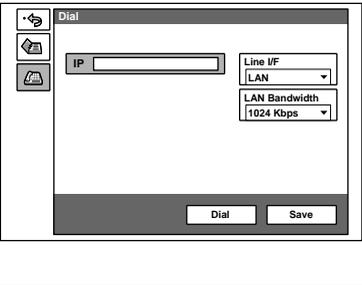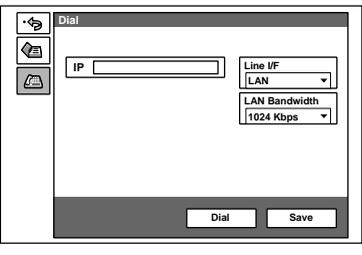
Item	Operation	Screen	Remarks (Confirmation item)
6.	The remote party makes a response.	Picture on the local site Picture on the remote site Meeting starts!	The ON LINE indicator (blue) lights. "Meeting starts!" is displayed, and the remote voice and image are heard and displayed from the monitor television.
7.	Disconnection Press the CONNECT/DISCONNECT (☎/☎) button of a remote controller. A confirmation message on whether to disconnect a line is then displayed. Select "OK" using a ← or → button of a remote controller and press the ENTER button, or press the CONNECT/DISCONNECT (☎/☎) button of a remote controller again.		The line is disconnected and the conference is terminated. The current display returns to a launcher menu.

1-6-4. Answering Procedure of LAN

Item	Operation	Screen	Remarks (Confirmation item)
1.	Calling from the remote party		A ringer tone occurs. "Incoming Call" is displayed on the screen.
2.	<For Auto Answer>		During connection, "Meeting starts!" is displayed, and the remote voice and image are heard and displayed from the monitor television.
	<For Manual Answer>		A ringer tone occurs and the guide screen for incoming appears on the screen. Select "OK" using a ← or → button of a remote controller and press the ENTER button.
			During connection, "Meeting starts!" is displayed, and the remote voice and image are heard and displayed from the monitor television.
3.	Remote disconnection		The message of conference termination is displayed on the screen and the current display returns to a launcher menu.

2-1. Confirmation Procedure of Local Terminal Operation Using Self-Loop

A self-loop is the reflected loop in the codec of the main unit.

Operation procedure

1. The launcher menu below is displayed when the power switch of a communication terminal is turned on.
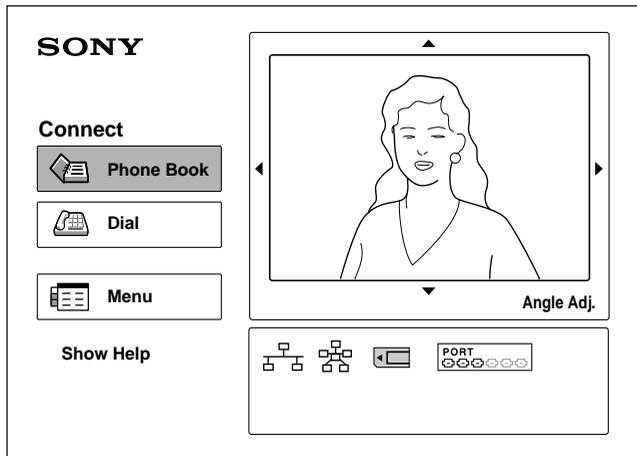
2. Select a dial using the ↑, ↓, ←, and → buttons of a remote controller and press the ENTER button or the CONNECT/DISCONNECT (☎/☎) button of a remote controller.
    The dial menu is displayed.
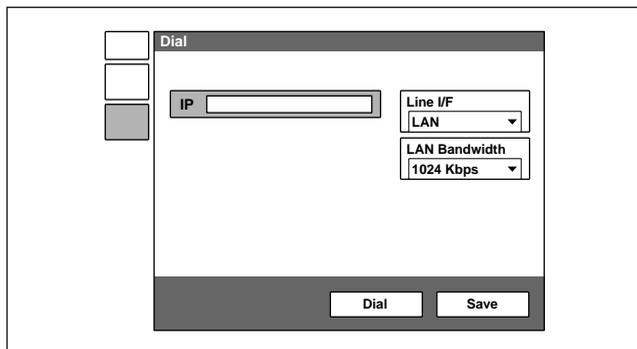
3. Select the line type.
    Select "Line Type" using the ↑, ↓, ←, and → buttons of a remote controller and press the ENTER button.
    Then, select "LAN" or "ISDN" using ↑ and ↓ buttons and press the ENTER button.

4. Select the number of lines used.
    Select "LAN Bandwidth" or "Number of Lines" using the ↑, ↓, ←, and → buttons of a remote controller and press the ENTER button.
    Then, select "1920 kbps" or "12B" using the ↑ and ↓ buttons and press the ENTER button.

5. Select column IP or A using the ↑, ↓, ←, and → buttons of a remote controller and press the ENTER button.
    Enter ✳ in column A from a remote controller two times.
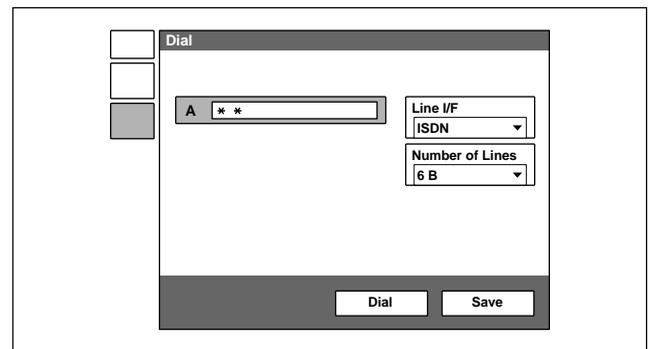
6. Select "Dial" using the ↑, ↓, ←, and → buttons of a remote controller and press the ENTER button or the CONNECT/DISCONNECT (☎/☎) button of a remote controller.
    A self-loopback is started and "Dialing" is displayed on the monitor screen. "Meeting starts!" is displayed when the loopback is completed. In this case, confirm that an image and voice are looped.

2-2.   LAN Communication Test using Ping

A LAN communication test can be performed using ping (ICMP).

Operation procedure

1.   The launcher menu below is displayed when the power switch of a communication terminal is turned on.
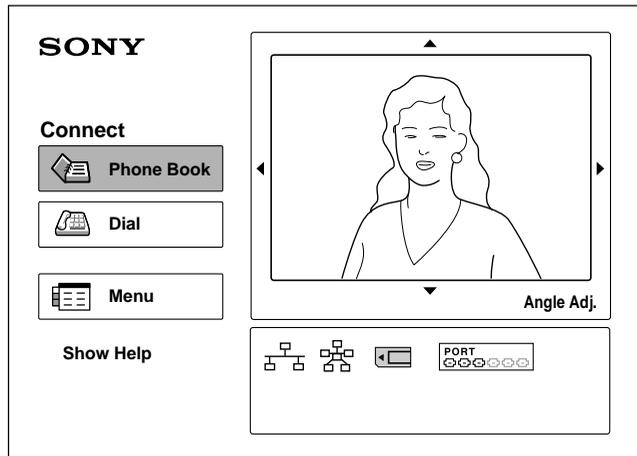
2.   Select a dial using the ↑, ↓, ←, and → buttons of a remote controller and press the ENTER button or the CONNECT/DISCONNECT (☎/☎) button of a remote controller.
    The dial menu is displayed.
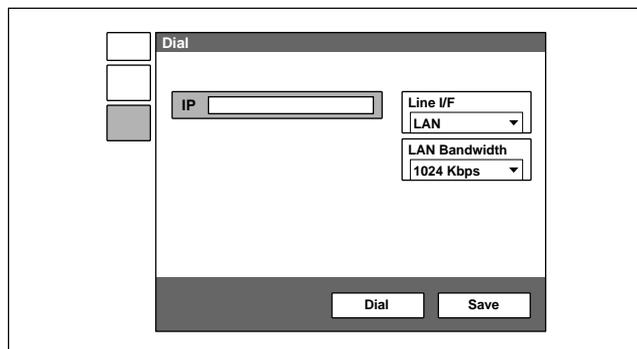
3.   Select "Line Type" using the ↑, ↓, ←, and → buttons of a remote controller and press the ENTER button. Then, select "LAN" using the ↑ and ↓ buttons and press the ENTER button.

4.   Select the IP column using the ↑, ↓, ←, and → buttons of a remote controller and press the ENTER button. Enter "PING. remote IP address" in the IP column. For example, enter PING.192.168.0.1 when performing a connection test to the device whose IP address is 192.168.0.1.
    Alphabets and numeric characters are switched using the "Kana/Alphabet/Numeric" button of a remote controller.
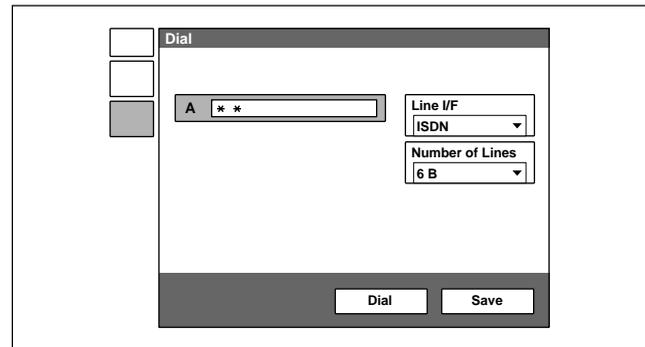
5.   Select "Dial" using the ↑, ↓, ←, and → buttons of a remote controller and press the ENTER button or the CONNECT/DISCONNECT (☎/☎) button of a remote controller.

6.   The screen during LAN outgoing is displayed. The message below is displayed in yellow below the "Dialing (LAN)" dialog box when the communication using ping succeeds.
    1 reply from 192.168.0.1
    The numeric character at the beginning is counted up sequentially. When it reaches 4, message window "Line cannot be connected completely. No reason: Redial again" is displayed at the bottom of the screen. When the communication using ping cannot be performed, no yellow characters is displayed and the message window described above is displayed.

2-3.   Locating the Components

Inspect the items below when this unit does not operate normally.

1.   This unit does not start even if the power switch on the side panel is turned on.
・ Check that the power cable is connected properly.
・ Check that the POWER indicator (green) on the front panel of the main unit lights.

2.   The main unit does not start even if you press the I/O button of a remote controller.
・ Check that the POWER indicator (orange) on the front panel of the main unit lights.
・ Check that the initial screen is displayed when the power switch on the side panel is turned on again.
    Check the power switch on the side panel and the power cable when the POWER indicator does not light.
・ Check that the transmission block of a remote controller emits light in the local image on the monitor when you press buttons with the remote controller put toward this unit.
    Check the consumed battery or failure of a remote controller when no light is emitted.

3.   The initial screen is not displayed. (The screen is black.)
・ Check the monitor power and input selection.
・ Check that the video cable is connected properly.
・ Connect with the monitor having a composite (video) input terminal when only an RGB monitor is connected.
    Set the dual monitor properly in a "General setup menu" when the initial screen is displayed on the monitor having a composite (video) input terminal.

4.   A local image is not displayed in the screen area of the initial screen.
・ Press the "input selection" button of a remote controller and confirm that the video input selection on the local side is "Main".
・ Check that the camera cable is connected properly.
・ Check that the POWER indicator (green) of a camera unit lights.

5. A line is not connected. (ISDN)
・ Check that the main unit and ISDN unit are properly connected. (Pay attention to the vertical direction of a connector.)
・ Check that the STATUS indicator (green) of an ISDN unit blinks.
・ Check that the STATUS 1 to 6 indicators (orange) of an ISDN unit light proportionally to the number of connected lines.
    Check the ISDN line and DSU (Digital Service Unit) when the indicators do not light.
・ Check whether loopback operation (Section 2-1) can be performed.
・ Check that the setting contents of a dial list and system setup are proper.
・ For bonding connection, check that the ISDN number of the local terminal on the incoming side is properly set (on pages 2 and 3 of an "ISDN setup menu").

6.   A line is not connected. (LAN)
- Check that the LAN cable is connected properly.
- Check that the left indicator (green) of the main unit's LAN connector blinks.
- Check that the LAN indicator (⬚) is highlighted in the system status display area (in the lower-right position of the screen) of the initial screen.
- Check that an IP address is properly displayed below the LAN indicator.
- Check that the setting contents of a dial list and system setup are proper.
- Check that ping can be used for a default gateway or connection destination in the communication test (Section 2-2) based on ping.

7.   The voice from the remote side cannot be heard after line connection.
- Check that the volume of the main unit is proper.
- Check that the volume of a monitor is proper.
- Check that the audio cable of the main unit and monitor is connected properly.
- Check that the remote side is not set to MIC OFF.
- Check that the audio input on the remote side is proper. (Check that a voice is normally input using an audio input level indicator on page 1/2 of an audio setup menu.)

8.   A voice does not reach the remote side after line connection.
- Check that the volume of the main unit on the remote side is proper.
- Check that the volume of the monitor on the remote side is proper.
- Check that the audio cable of the main unit and monitor on the remote side is connected properly.
- Check that the local side is not set to MIC OFF.
- Check that the audio input on the local side is proper. (Check that a voice is normally input using an audio input level indicator on page 1/2 of an audio setup menu.)

9.   The image from the remote side is not displayed after line connection.
- Check that the video input on the remote side is selected properly.
- Check that the display can be switched using the remote/local button of a remote controller.
- Check that a local image is displayed in self-loopback (Section 2-1) without any problem.
- Check that a remote image is displayed during connection with other remote sides.

10. An image does not reach the remote side after line connection.
- Check that the video input on the local side is selected properly.
- Check that the display can be switched using the remote/local button of a remote controller on the remote side.
- Check that a local image is displayed in self-loopback (Section 2-1) on the remote side without any problem.
- Check that a remote image on the remote side is displayed during connection with other remote sides.

2-4. Operation Log

PCS1/1P has a function that outputs the internal processing history, between the connection and disconnection of a line, to the commercial PC connected to the outside and a function that saves the latest history of 1M byte in a Memory Stick (refer to the saving of system log on page 2-18).

Operation log using commercial PC (1)
Connect an AUX CONTROL terminal and PC to the right on the front panel of PCS-1/1P.
Start the power of PCS-1/1P and PC.
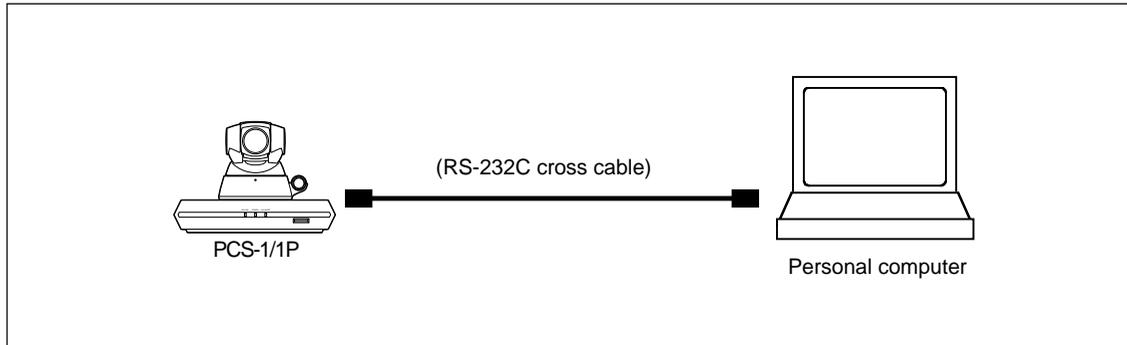
Activate accessory software "Hyper Terminal" of PC Windows 95/98/2000/XP on PC and set the communication format as described below.

Transmission rate: 38,400 bps
Data length: 8 bits
Stop bits: 2 bits
Parity bit: None

The procedure for "Hyper Terminal" activation, communication format setting, and operation log execution is described on the next page and later.

・ Windows is the registered trademark of Microsoft Corporation.
・ For Windows 2000/XP, the procedure is "Start menu" → "Program" → "Accessories" →
  "Communications" → "Hyper Terminal".
  Note: In a hyper terminal, only 500 lines can be logged. For long-time logging, use other terminal
        emulators.

(1) Click "Start menu", "Accessories", "Communications", and then "HyperTerminal".
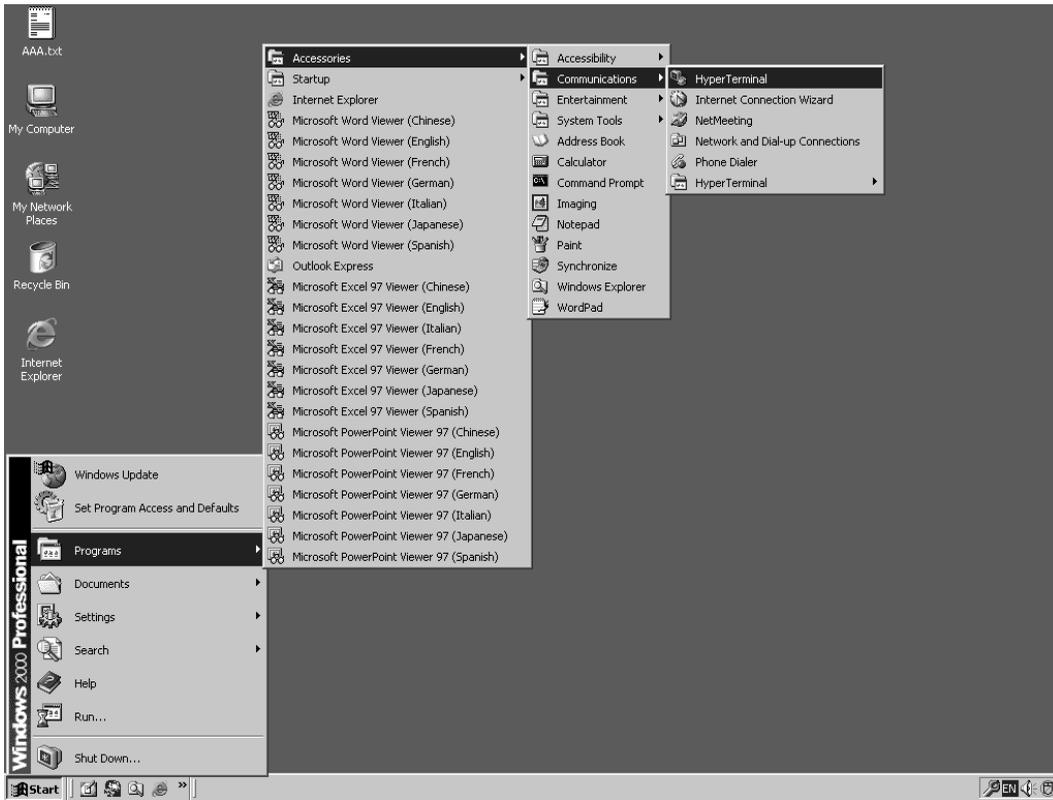
(2) Enter "VT100" in "Name", select any icon, and click the "OK" button.
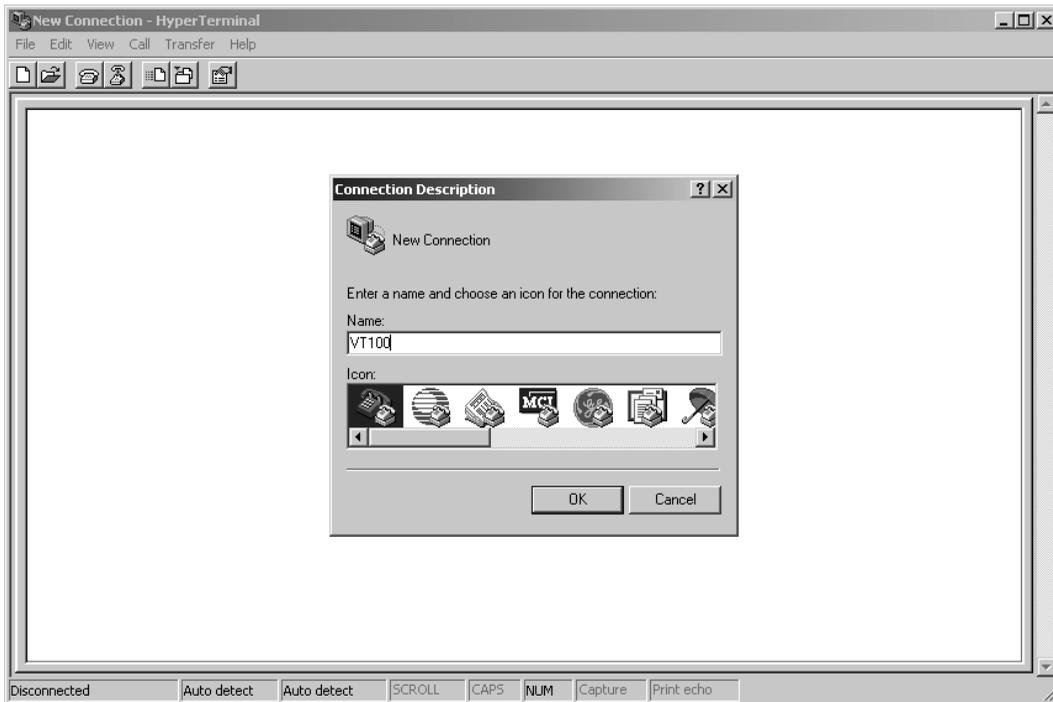
(3) Select "COM1" in "Connect using" and click the "OK" button.
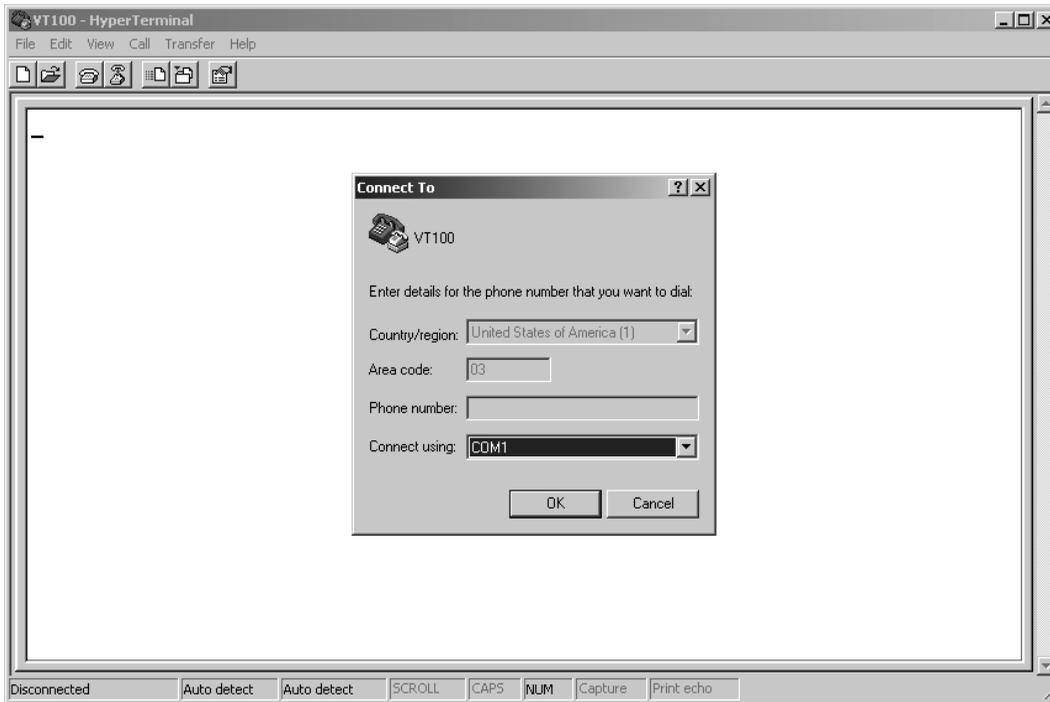
(4) Set the baud rate as described below and click the "OK" button.

Bits per second: 38400
Data bits: 8
Parity: None
Stop bits: 2
Flow control: Xon/Xoff
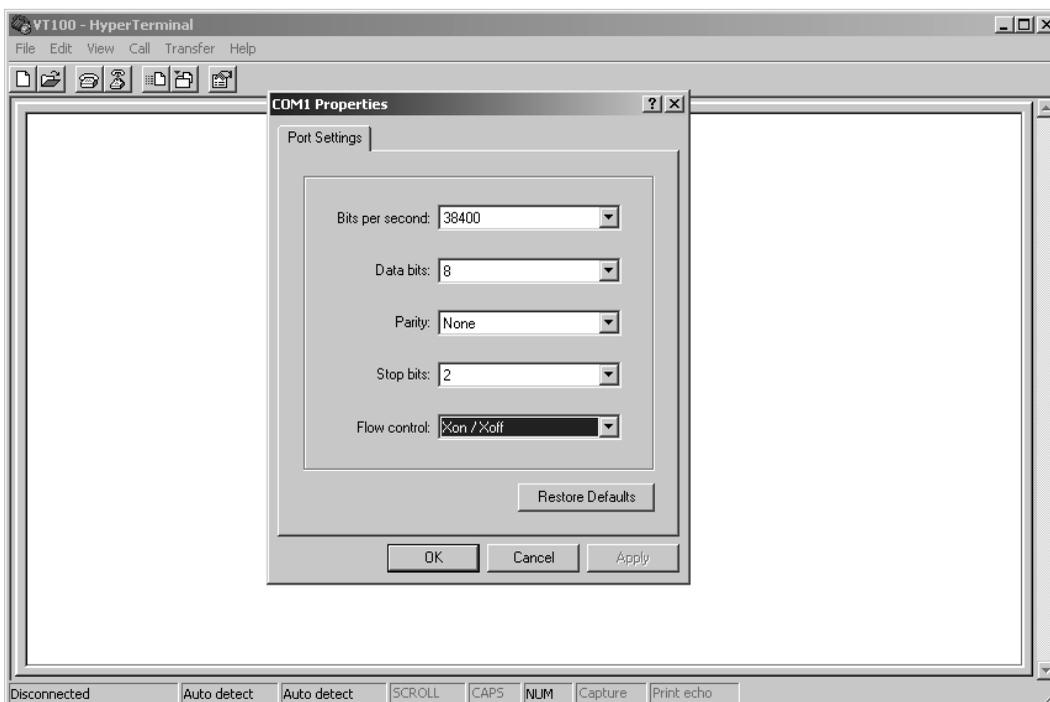
(5) Click "Capture Text" from a "Transfer" menu.
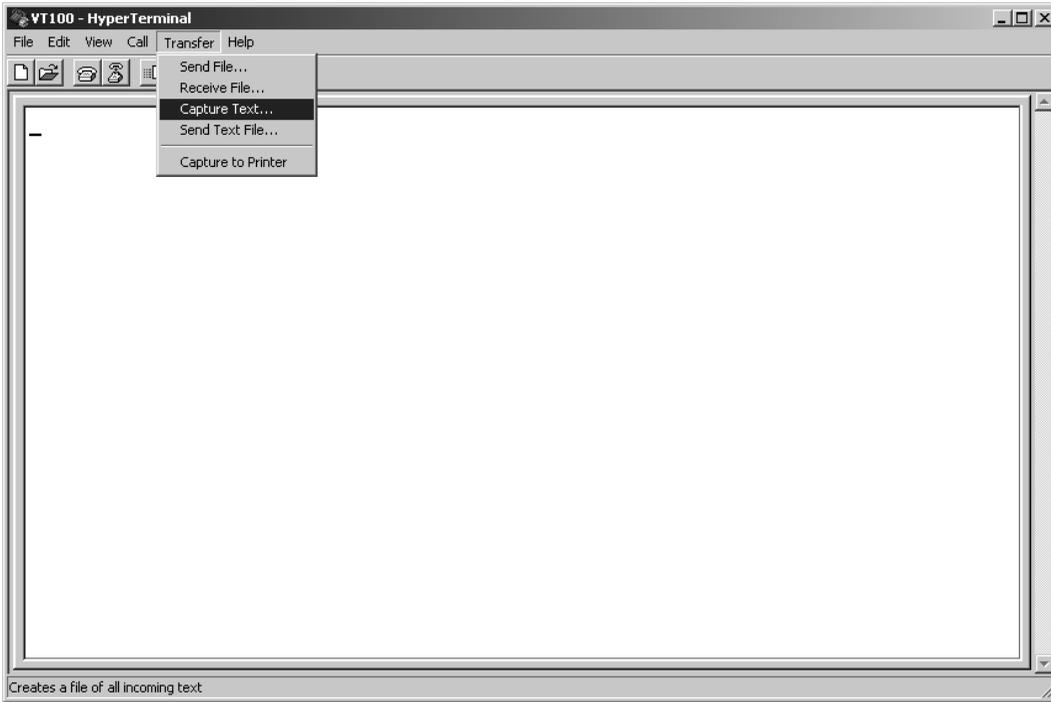
(6) Set the saving place and name of a log file and click "Start".
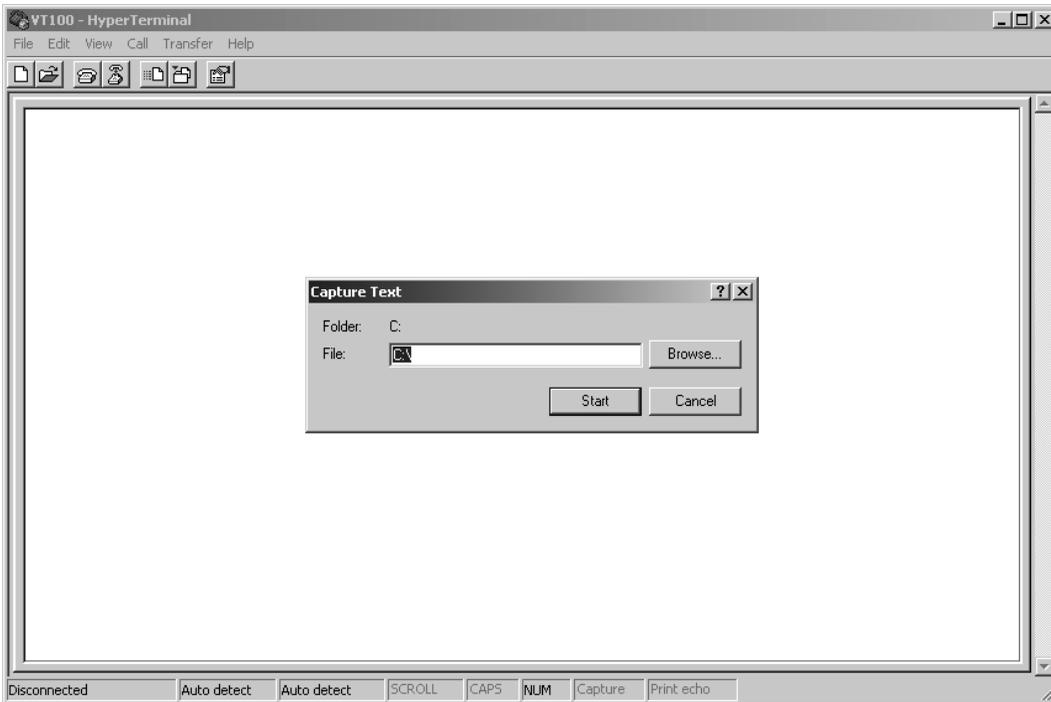
(7) After logging, click "Stop" from "Capture Text" in a "Transfer" menu.
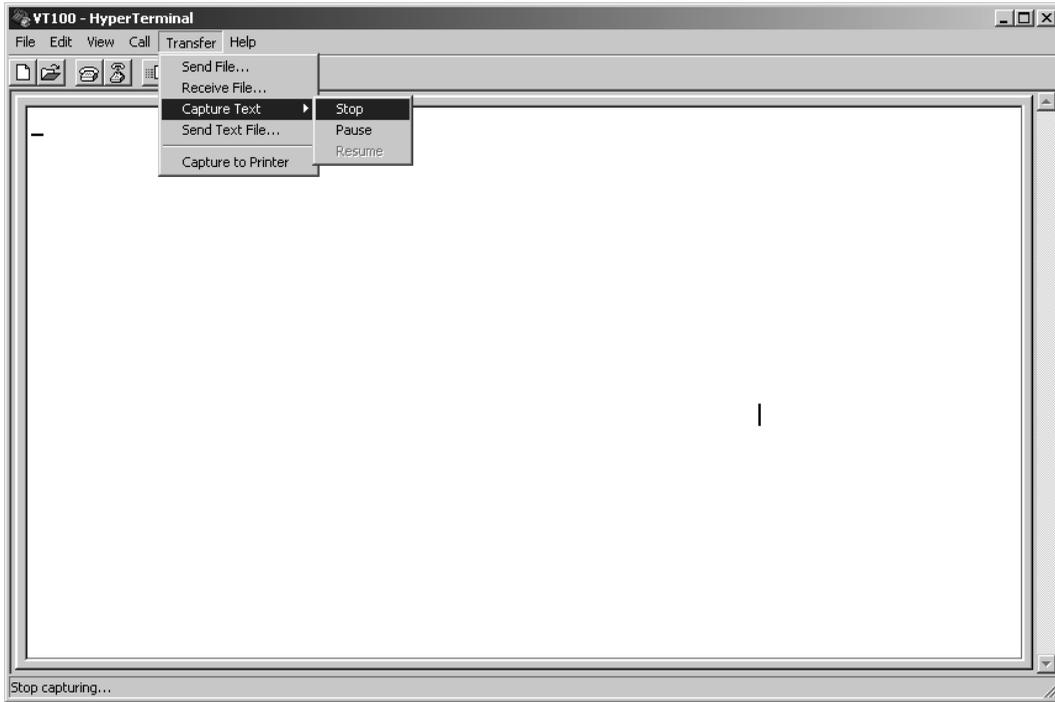
(8) Double-click the extracted log file to view a log.

Operation log using commercial PC (2)

When PCS-1/1P is connected to LAN, a log can be extracted from PCS-1/1P using telnet with PC connected to LAN.

Even when PCS-1/1P is not connected to LAN, a log can be extracted from PCS-1/1P using telnet by connecting the 100BASE-TX/10BASE-T terminal on the rear panel of PCS-1/1P and the LAN terminal of PC directly using a LAN cross cable.

First, connect PCS-1/1P and PC to LAN, or connect them directly using a cross cable and set LAN of IP. After that, transmit ping from PC to PCS-1/1P and confirm that a reply is returned from PCS-1/1P.

(1) Click "Command prompt" from "Start menu".
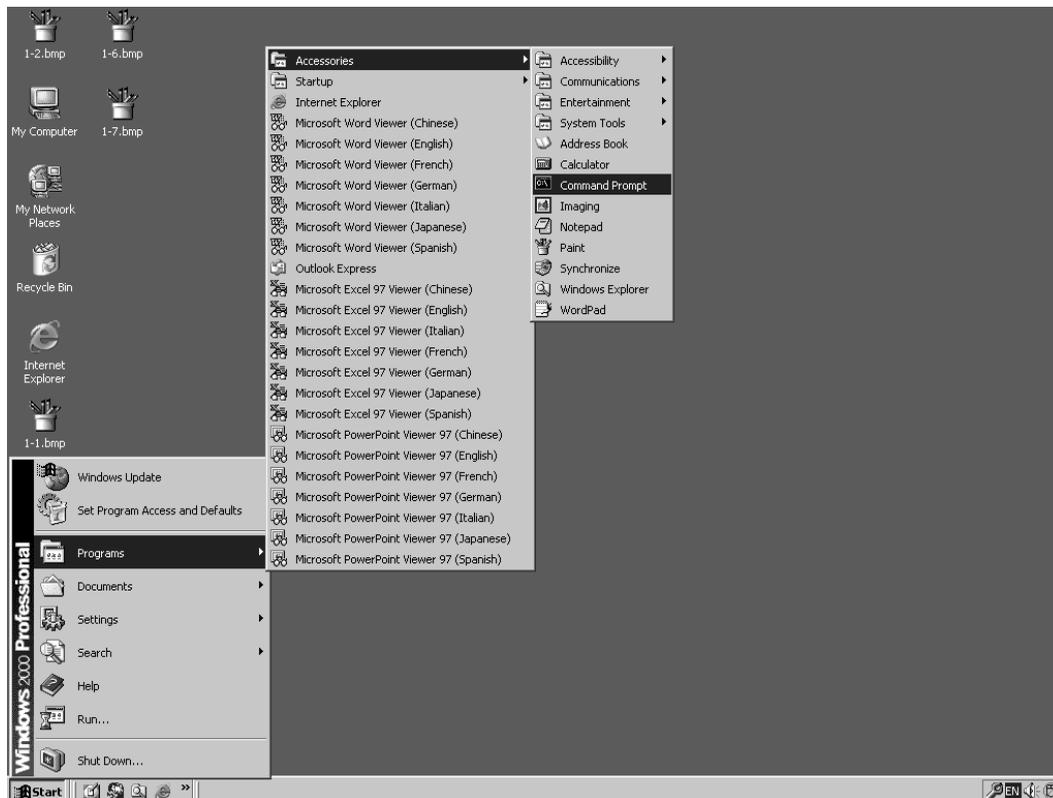
(2) Enter ping, and then enter the IP address of PCS-1/1P after spacing out. Press the [Enter] key and confirm that a reply is returned. After confirmation, close the command prompt.


```
Command Prompt                                                    _ □ ×
Microsoft Windows 2000 [Version 5.00.2195]
(C) Copyright 1985-2000 Microsoft Corp.

C:\>ping 191.100.100.66

Pinging 191.100.100.66 with 32 bytes of data:

Reply from 191.100.100.66: bytes=32 time<10ms TTL=255
Reply from 191.100.100.66: bytes=32 time<10ms TTL=255
Reply from 191.100.100.66: bytes=32 time<10ms TTL=255
Reply from 191.100.100.66: bytes=32 time<10ms TTL=255

Ping statistics for 191.100.100.66:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum =  0ms, Average =  0ms

C:\>_
```

(3) Click "Start menu", "Accessories", "Communications", and then "HyperTerminal".

(4) Enter "LAN" in "Name:", select any icon, and click the "OK" button.

(5) Select "TCP/IP (Winsock)" in "Connect using", enter the IP address of PCS-1/1P in "Host address:", and click the "OK" button.
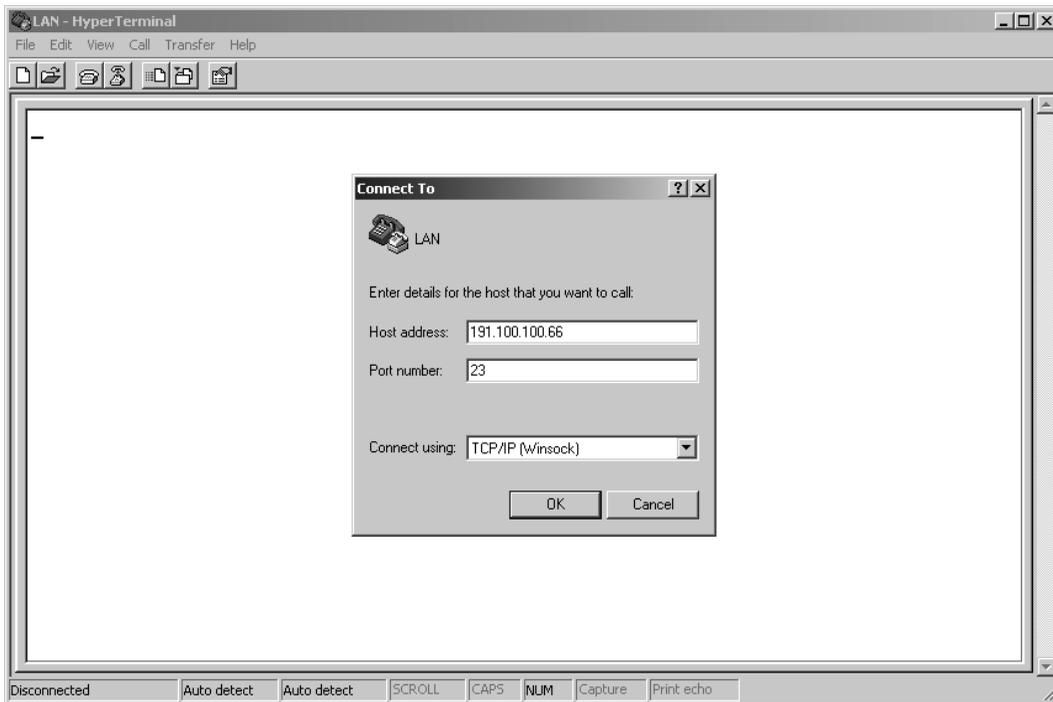
(6) Click "Capture Text" from a "Transfer" menu.
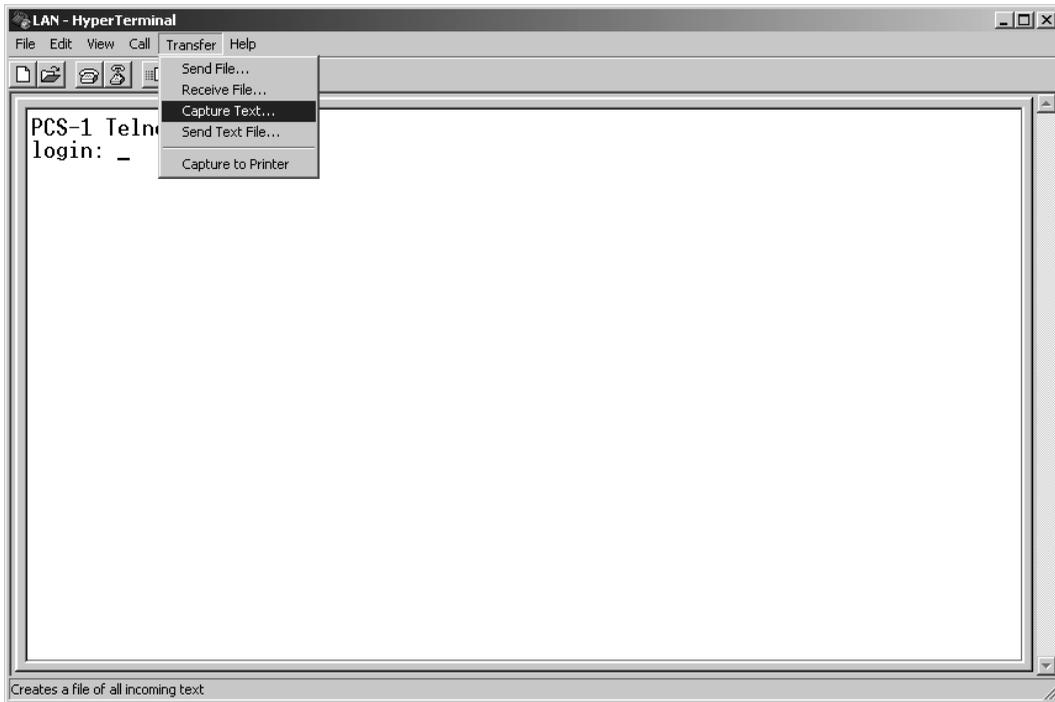
(7) Set the saving place and name of a log file and click the "Start" button.
Example of name: PCS-1LOG.txt
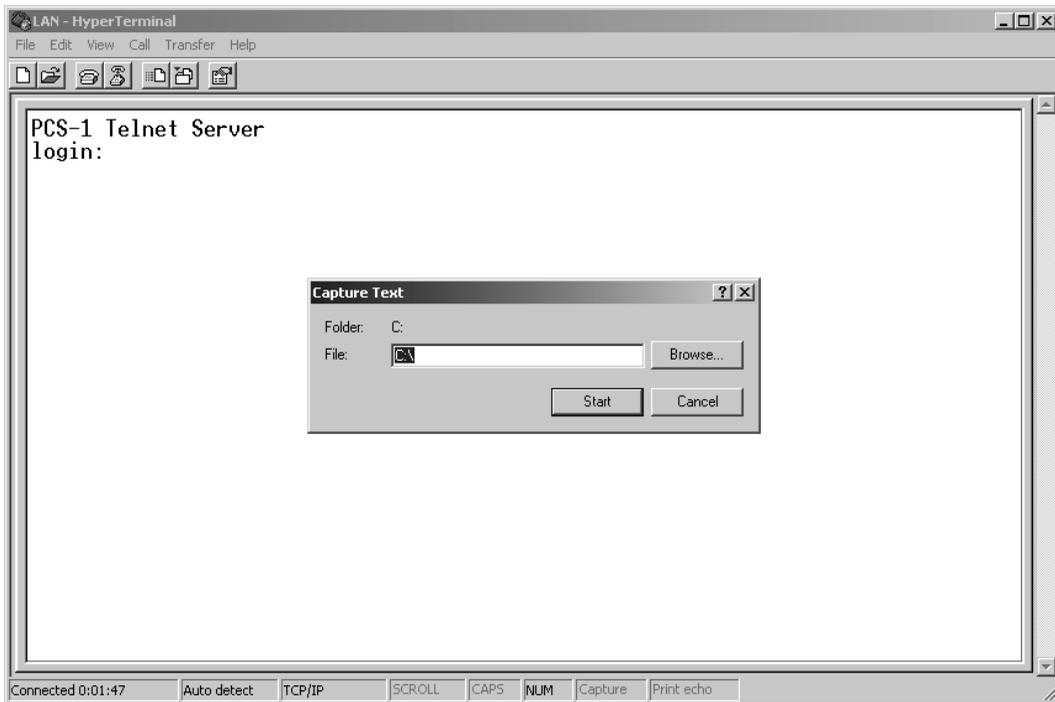
(8) The message below is displayed on the hyper terminal screen.

PCS-1 Telnet Server

login:

Enter sonypcs and press the Enter key. Password: is then displayed. Press the Enter key again. A log begins to be extracted.

```
PCS-1 Telnet Server
login: sonypcs
Password:
Login accepted
lan_tns<**.***>Telnet(23)>tnserv() TELD_RECV_CMD command recv (cmd=)
_
```
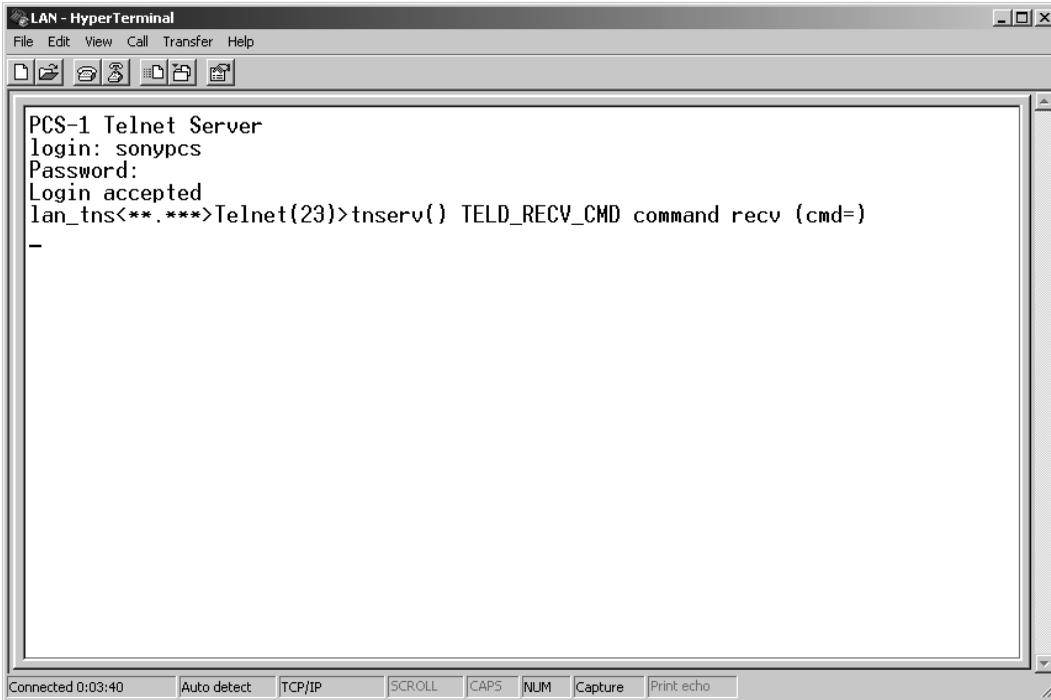
(9) After log extraction is completed, click "Stop" from "Capture Text" in a "Transfer" menu.

```
help                           his help menu.
reset                          system reset.
speed [speed]                  set speed.(9600-115200)
mode (mode)                    change access mode.(byte/word/dword)
dump (addr)                    dump memory.
set [addr],[data](;)           set memory.(no verify)
mail [task_id],[message] send task message.
pass                           enter command bypass mode.
format [flash/ms]              format flash/ms.
dir                            show flash/ms directry.
cd                             change flash/ms directry.
copy [source],[dest.]          copy file.
load [file_name/keyword] load file from ms to flash.
save [file_name/keyword] save file from flash to ms.
date [yyyy-mm-dd]              set date.
time [hh-mm-ss]                set time.
sdsp                           set dsp.
rdsp                           read dsp.
dldsp                          post Tidspif_DownloadToTIDSP.
i2c ssaa [dd]                  i2c R/W ss:slave adrs aa:adrs dd:data(8bit).
loopback (mode)                loopback (1:Start/0:Stop)

pcsdb>
```

(10) Double-click the extracted log file to view a log.

2-5. Updating of Software

The software of the main unit may be updated for improvement in a function.
Two methods are available for updating.

2-5-1. Updating Using Memory Stick

POWER lamp (green)   Memory Stick slot

Take care that the power is not absolutely turned off in this while. Software may not be able to be updated.	Turn off the power switch on the side panel of the main unit.

Insert a Memory Stick.

Turn on the power switch.
The POWER lamp (green) lights.
The loader execution screen is displayed.

A launcher menu is displayed on the monitor television.

Push in a Memory Stick once and then take out it.

Select "Setup" and confirm "Host version" in a information menu.

Return to the launcher menu and turn off the power switch on the rear panel of this unit.

Turn on the power switch again and reconfirm "Host version".

2-6. Service Mode

In the service menu of PCS-1/1P, data can be saved in the a commercial Memory Stick or read from a Memory Stick (overwritten in the current data).

1. Continuously press the menu button of a remote controller and display a "Setup" menu including "Dial" and "Answer".

```
 ·⤷     Setup
 🛠
          📞▸ Dial              📞… Answer
          🔗 Multipoint         🔊 Audio
          ⚙ General            0━ Administrator
          ⟫Z ISDN              ⎕🔗⎕ LAN
          ❶ Information         ⎕Z⎕ Status
```
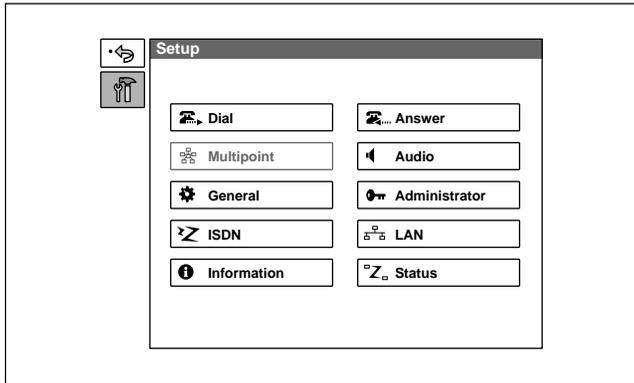
2. Press the → button of a remote controller and select "Dial". Enter "7" and "2" sequentially using the numeric key of a remote controller without pressing the ENTER button and display the service menu.

```
      Service
        Command  [                    ]
      Save Phone Book      Save Setup
      Load Phone Book      Load Setup
      Clear Phone Book     Clear Setup
      Save Application     Load Application
      Save Call Log        System Reset
      Save System Log
                          Save      Cancel
```
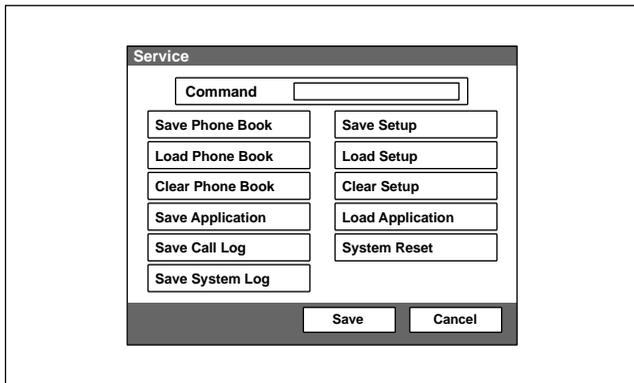
Note

To cancel the service mode, select "Cancel" using ↑, ↓, ←, and → buttons of a remote controller and press the ENTER button, or press the return button of a remote controller. The current display returns to a set menu.

For saving of a phone book, loading of a phone book, saving of application, saving of a communication log, saving of a system log, saving of setting, and loading of setting

1. Display a service menu.
2. Insert the Memory Stick, in which data can be written or in which the required contents have been already recorded, into a Memory Stick slot.
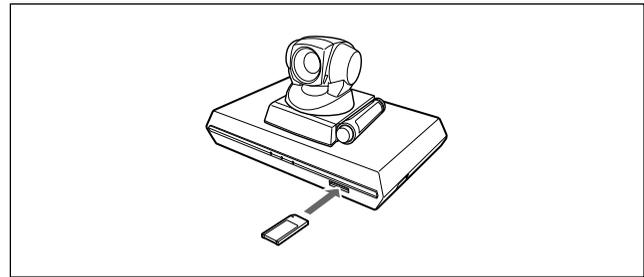
3. Select the function, which you want to execute, using ↑, ↓, ←, and → buttons of a remote controller and press the ENTER button.
4. A confirmation message on whether to execute the function is displayed. To execute, select "OK" and press the ENTER button. To cancel execution, select "Cancel" and press the ENTER button.
5. After execution or cancellation, the current display returns to a service menu.
6. Push in the Memory Stick once and take out it.

For erasure of a phone book and setup

1. Display a service menu.
2. Select the function, which you want to execute, using ↑, ↓, ←, and → buttons of a remote controller and press the ENTER button
3. A confirmation message on whether to execute the function is displayed. To execute, select "OK" and press the ENTER button. To cancel execution, select "Cancel" and press the ENTER button.
4. After execution or cancellation, the current display returns to a service menu.

For system reset

1. Display a service menu.
2. Select "System reset" using ↑, ↓, ←, and → buttons of a remote controller and press the ENTER button
3. A confirmation message on whether to execute is displayed. To execute, select "OK" and press the ENTER button. To cancel execution, select "Cancel" and press the ENTER button.
4. After execution, a launcher menu is displayed. After cancellation, the current display returns to a service menu.

For loading of application

1. Display a service menu.
2. Insert the Memory Stick, in which the application software of the version to be loaded is recorded, into a Memory Stick slot.
3. Select "Load application" using ↑, ↓, ←, and → buttons of a remote controller and press the ENTER button.
4. A confirmation message on whether to execute is displayed.
5. To execute, select "OK" and press the ENTER button. The screen display during loader execution then appears. After completion, a launcher menu is displayed. To cancel execution, select "Cancel" and press the ENTER button. The current display returns to a service menu.
6. Push in the Memory Stick once and take out it.

Note

Do not turn off the power or take out a Memory Stick until the launcher menu is displayed.

For command input

1. Display a service menu.
2. Select "Command" using ↑, ↓, ←, and → buttons of a remote controller and press the ENTER button.
   A key guidance is then displayed.
3. Enter the commands in a command list from a remote controller.
   Notes
   - To set two or more commands, put a one-character blank between the commands and then enter them.
   - Set only one type of LAN interface. If not, the LAN interface does not operate normally.
4. Select "Save" using ↑, ↓, ←, and → buttons of a remote controller and press the ENTER button.
   A set menu is then displayed.
5. When a LAN interface is set (including the case where the setting is returned to the initial value), restart the main unit using the power switch of a communication terminal.

To stop setting

Select "Cancel" using ↑, ↓, ←, and → buttons of a remote controller and press the ENTER button, or press the return button of a remote controller.

Note

Do not enter commands other than shown in a command list. The internal operation mode may be changed in this case.

Contents of functions

1) Command
   The internal operation mode of the main unit is changed for a test and service.

Command list

| Command	Description
SMS	Validates an SMS function.
KV66	Sets a KV-29FX66E monitor when it is used. Using an IR repeater, this command sets the input selection of a KV-29FX66E monitor to 3 after the power is turned on. An IR output is changed so that the command during power-off sequence is sent properly. The setting of the IR repeater mode is invalided when this command is specified.
WBxxxXyyy	Sets the size (height × width) of the whiteboard used.
YCLP**	Clips the luminance value in a menu to the specified value. The section having the luminance of more than the specified value is clipped to the specified value. (** is one of 80, 90, A0, B0, C0, D0, and E0 values.)
YLVL**	Shifts the luminance value in a menu downward proportionally to the specified value. As a value increase, the whole screen becomes darker. Since all values are shifted, the black side seems crushed. (** is a value of 0 < ** < 80 in decimal.)
D2B	Sets ISDN (2B) to the default value using a dial menu. Usually, set to LAN.
PWD1	The password for an administrator invalidates the password lock of a phone book when a setting super-user password is blank in a column.
SMFF	Fixes a sub-monitor to the remote video.
BMR0	Sets the bonding mode to Revision 0 (in which up to the conventional seven-digit address number can be used).
SMSTEST	Displays SAB without connecting with the SMS server.
PROJ	Sends the remote control code for the projector.
POFF	Makes the packet loss indicator non-display.

Notes

- To set two or more types of commands, put a one-character blank between commands.
- The validated command can be confirmed in a command column at all times.
- Do not enter commands other than described in the table. This may change the internal operation mode.

2) Save Phone Book

All contents of a phone book are recorded and saved in a Memory Stick. After execution, a file is created in the area below in the Memory Stick.

\MSSONY\PRO\TVCONF\LIST\PCS_DLST.CSV

This file can be edited using Microsoft Excel. Do not change the file name.

3) Load Phone Book

The contents of a phone book (the file above in the folder described above) recorded in a memory stick are written in the phone book of the main unit.

The contents cannot be returned to the former setting after they are rewritten.

4) Clear Phone Book

All contents of a phone book in the main unit are erased.

The contents cannot be returned to the former setting after they are erased.

5) Save Application

The software of the main unit is saved in a Memory Stick. However, an MCU option is not saved in a Memory Stick. MCU software or LAN software is required separately.

6) Save Call Log

The communication log recorded in the main unit is recorded and saved in a Memory Stick. A maximum of 500 latest logs are recorded in the main unit. After execution, a file is created in the area below in a Memory Stick.

\MSSONY\PRO\TVCONF\LOG\PCS_LOG.CSV

This file can be edited using Microsoft Excel.

7) Save System Log

A debug log is recorded and saved in a Memory Stick. A maximum of 1M byte log is recorded and saved. After execution, a file is created in the area below in a Memory Stick.

\MSSONY\PRO\TVCONF\DEBUG\PCS_DEB.TXT

This file can be edited using Microsoft Memo Pad, Word Pad, or Word.

8) Save Setup

All set information items in a set menu are recorded and saved in a Memory Stick. After execution, a file is created in the area below in a Memory Stick.

\MSSONY\PRO\TVCONF\SETUP\PCS_STUP.CSV

This file can be edited using Microsoft Excel.

9) Load Setup

The setup information (\MSSONY\PRO\TVCONF\SETUP\PCS_STUP.CSV) recorded in a Memory Stick is overwritten in the setup menu of the main unit. After execution, the screen disappears once, and a launcher menu is displayed in the same way as after the power is turned on.

The set information cannot be returned to the former setting after it is rewritten.

10) Clear Setup

All information items, in a setup menu, set to the main unit are erased. After execution, the screen disappears once, and a setup wizard is displayed in the same way as when the power is turned on first.

11) Load Application

The software of the main unit recorded in a Memory Stick is loaded.

12) System Reset

Software reset is applied to the main unit. After execution, the screen disappears once, and a launcher menu is displayed in the same way as after the power is turned on.

Section 3
Compatibility in LAN Network

3-1. Connection via Hub

Example of system

When a call is initiated from teleconference terminal A to teleconference terminal B.

1. The LAN setup menu of teleconference terminal B is set as described below.

DHCP Mode:	OFF
Host Name:	Enter any name.
IP Address:	Local IP address (192.100.10.20)
Network Mask:	Depends on a network. Usually, set to 255.255.255.0.
Gateway Address:	Blank
DNS Address:	Blank
Gatekeeper Mode:	OFF
Gatekeeper Address:	Blank
User Alias:	Blank
User Number:	Blank
SNMP Mode:	OFF
Trap Destination:	Blank
Community:	public
Description:	Videoconference Device
Location:	Blank
Contact:	Blank
NAT Mode:	OFF
NAT Address:	Blank
Packet Resend Request:	Blank
Adaptive Rate Control:	OFF (Set to ON when a packet loss occurs frequently.)
LAN Mode:	Auto Nagotiation (This mode is changed to a proper mode when mismatching occurs in the mode. Refer to "4-2. PCS-1/1P and Hub setting".)
Port Number Used:	Default (Set to "Custom" when a port number is specified by the network administrator.)
TCP Port Number:	2253 (Enter the port number specified by the network administrator when the port number used is set to "Custom".)
UDP Port Number:	49152 (Enter the port number specified by the network administrator when the port number used is set to "Custom".)
TOS:	OFF
PPPoE:	OFF
PPPoE User Name:	Blank
PPPoE Password:	Blank

Fixed IP for PPPoE: OFF

Fixed IP Address for PPPoE: Blank

PPPoE DNS: Obtain automatically

Primary DNS: Cannot be set.

Secondary DNS: Cannot be set.

2. Confirm that the IP address displayed in the launcher menu of teleconference terminal B is 192.100.10.20.

3. The LAN setup menu of teleconference terminal A is set as described below.

DHCP Mode:	OFF
Host Name:	Enter any name.
IP Address:	Local IP address (192.100.10.10)
Network Mask:	Depends on a network. Usually, set to 255.255.255.0.
Gateway Address:	Blank
DNS Address:	Blank
Gatekeeper Mode:	OFF
Gatekeeper Address:	Blank
User Alias:	Blank
User Number:	Blank
SNMP Mode:	OFF
Trap Destination:	Blank
Community:	public
Description:	Videoconference Device
Location:	Blank
Contact:	Blank
NAT Mode:	OFF
NAT Address:	Blank
Packet Resend Request:	Blank
Adaptive Rate Control:	OFF (Set to ON when a packet loss occurs frequently.)
LAN Mode:	Auto Nagotiation (This mode is changed to a proper mode when mismatching occurs in the mode. Refer to "4-2. PCS-1/1P and Hub setting".)
Port Number Used:	Default (Set to "Custom" when a port number is specified by the network administrator.)
TCP Port Number:	2253 (Enter the port number specified by the network administrator when the port number used is set to "Custom".)
UDP Port Number:	49152 (Enter the port number specified by the network administrator when the port number used is set to "Custom".)
TOS:	OFF
PPPoE:	OFF
PPPoE User Name:	Blank
PPPoE Password:	Blank
Fixed IP for PPPoE:	OFF
Fixed IP Address for PPPoE: Blank	
PPPoE DNS:	Obtain automatically
Primary DNS:	Cannot be set.
Secondary DNS:	Cannot be set.

4. Confirm that the IP address displayed in the launcher menu of teleconference terminal A is 192.100.10.10.

5. Enter LAN in the phone book of teleconference terminal A for a line I/F, IP address 192.100.10.20 of teleconference terminal B in it for an IP address, and other required items. After that, register teleconference terminal B in the phone book and initiate a call. Or set LAN for a line I/F and IP address 192.100.10.20 of teleconference terminal B for an IP address by Dial, and then initiate a call.

3-2. Connection via Router

Example of system

When a call is initiated from teleconference terminal A to teleconference terminal B.

1. The LAN setup menu of teleconference terminal B is set as described below.

DHCP Mode:	OFF
Host Name:	Enter any name.
IP Address:	Local IP address (192.100.20.20)
Network Mask:	Depends on a network. Usually, set to 255.255.255.0.
Gateway Address:	192.100.20.1
DNS Address:	Blank
Gatekeeper Mode:	OFF
Gatekeeper Address:	Blank
User Alias:	Blank
User Number:	Blank
SNMP Mode:	OFF
Trap Destination:	Blank
Community:	public
Description:	Videoconference Device
Location:	Blank
Contact:	Blank
NAT Mode:	OFF
NAT Address:	Blank
Packet Resend Request:	Blank
Adaptive Rate Control:	OFF (Set to ON when a packet loss occurs frequently.)
LAN Mode:	Auto Nagotiation (This mode is changed to a proper mode when mismatching occurs in the mode. Refer to "4-2. PCS-1/1P and Hub setting".)
Port Number Used:	Default (Set to "Custom" when a port number is specified by the network administrator.)
TCP Port Number:	2253 (Enter the port number specified by the network administrator when the port number used is set to "Custom".)
UDP Port Number:	49152 (Enter the port number specified by the network administrator when the port number used is set to "Custom".)
TOS:	OFF
PPPoE:	OFF
PPPoE User Name:	Blank
PPPoE Password:	Blank
Fixed IP for PPPoE:	OFF
Fixed IP Address for PPPoE: Blank	

PPPoE DNS:	Obtain automatically
Primary DNS:	Cannot be set.
Secondary DNS:	Cannot be set.

2. Confirm that the IP address displayed in the launcher menu of teleconference terminal B is 192.100.20.20.

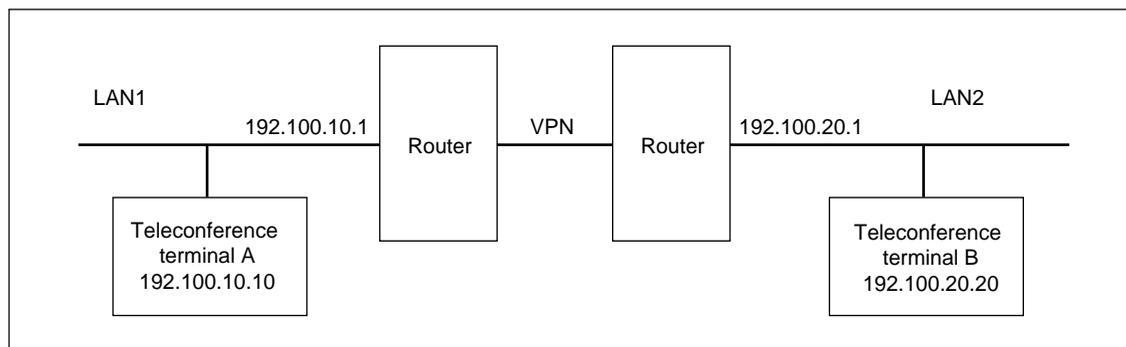3. The LAN setup menu of teleconference terminal A is set as described below.

DHCP Mode:	OFF
Host Name:	Enter any name.
IP Address:	Local IP address (192.100.10.10)
Network Mask:	Depends on a network. Usually, set to 255.255.255.0.
Gateway Address:	192.100.10.1
DNS Address:	Blank
Gatekeeper Mode:	OFF
Gatekeeper Address:	Blank
User Alias:	Blank
User Number:	Blank
SNMP Mode:	OFF
Trap Destination:	Blank
Community:	public
Description:	Videoconference Device
Location:	Blank
Contact:	Blank
NAT Mode:	OFF
NAT Address:	Blank
Packet Resend Request:	Blank
Adaptive Rate Control:	OFF (Set to ON when a packet loss occurs frequently.)
LAN Mode:	Auto Nagotiation (This mode is changed to a proper mode when mismatching occurs in the mode. Refer to "4-2. PCS-1/1P and Hub setting".)
Port Number Used:	Default (Set to "Custom" when a port number is specified by the network administrator.)
TCP Port Number:	2253 (Enter the port number specified by the network administrator when the port number used is set to "Custom".)
UDP Port Number:	49152 (Enter the port number specified by the network administrator when the port number used is set to "Custom".)
TOS:	OFF
PPPoE:	OFF
PPPoE User Name:	Blank
PPPoE Password:	Blank
Fixed IP for PPPoE:	OFF
Fixed IP Address for PPPoE:	Blank
PPPoE DNS:	Obtain automatically
Primary DNS:	Cannot be set.
Secondary DNS:	Cannot be set.

4. Confirm that the IP address displayed in the launcher menu of teleconference terminal A is 192.100.10.10.

5. Enter LAN in the phone book of teleconference terminal A for a line I/F, IP address 192.100.20.20 of teleconference terminal B in it for an IP address, and other required items. After that, register teleconference terminal B in the phone book and initiate a call. Or set LAN for a line I/F and IP address 192.100.20.20 of teleconference terminal B for an IP address by Dial, and then initiate a call.

3-3. Connection via DHCP

Example of system

When a call is initiated from teleconference terminal A to teleconference terminal B.

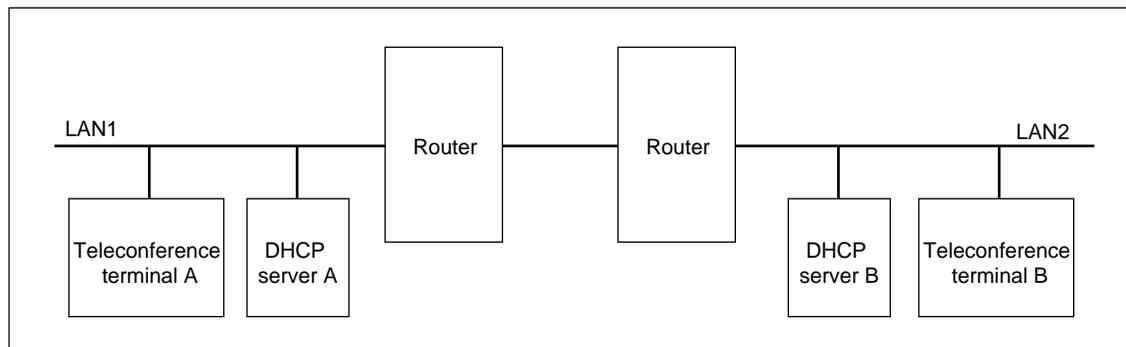1. The LAN setup menu of teleconference terminal B is set as described below.

DHCP Mode:	ON
Host Name:	Enter any name.
IP Address:	Blank (Cannot be set.)
Network Mask:	Blank (Cannot be set.)
Gateway Address:	Blank (Cannot be set.)
DNS Address:	Blank (Cannot be set.)
Gatekeeper Mode:	OFF
Gatekeeper Address:	Blank
User Alias:	Blank
User Number:	Blank
SNMP Mode:	OFF
Trap Destination:	Blank
Community:	public
Description:	Videoconference Device
Location:	Blank
Contact:	Blank
NAT Mode:	OFF
NAT Address:	Blank
Packet Resend Request:	Blank
Adaptive Rate Control:	OFF (Set to ON when a packet loss occurs frequently.)
LAN Mode:	Auto Nagotiation (This mode is changed to a proper mode when mismatching occurs in the mode. Refer to "4-2. PCS-1/1P and Hub setting".)
Port Number Used:	Default (Set to "Custom" when a port number is specified by the network administrator.)
TCP Port Number:	2253 (Enter the port number specified by the network administrator when the port number used is set to "Custom".)
UDP Port Number:	49152 (Enter the port number specified by the network administrator when the port number used is set to "Custom".)
TOS:	OFF
PPPoE:	OFF
PPPoE User Name:	Blank
PPPoE Password:	Blank
Fixed IP for PPPoE:	OFF
Fixed IP Address for PPPoE:	Blank

PPPoE DNS: Obtain automatically
Primary DNS: Cannot be set.
Secondary DNS: Cannot be set.

2. Confirm that the IP address is displayed in the launcher menu of teleconference terminal B.
   (Example: IP:192.100.20.20)
3. The LAN setup menu of teleconference terminal A is set as described below.

DHCP Mode:	ON
Host Name:	Enter any name.
IP Address:	Blank
Network Mask:	Blank
Gateway Address:	Blank
DNS Address:	Blank
Gatekeeper Mode:	OFF
Gatekeeper Address:	Blank
User Alias:	Blank
User Number:	Blank
SNMP Mode:	OFF
Trap Destination:	Blank
Community:	public
Description:	Videoconference Device
Location:	Blank
Contact:	Blank
NAT Mode:	OFF
NAT Address:	Blank
Packet Resend Request:	Blank
Adaptive Rate Control:	OFF (Set to ON when a packet loss occurs frequently.)
LAN Mode:	Auto Nagotiation (This mode is changed to a proper mode when mismatching occurs in the mode. Refer to "4-2. PCS-1/1P and Hub setting".)
Port Number Used:	Default (Set to "Custom" when a port number is specified by the network administrator.)
TCP Port Number:	2253 (Enter the port number specified by the network administrator when the port number used is set to "Custom".)
UDP Port Number:	49152 (Enter the port number specified by the network administrator when the port number used is set to "Custom".)
TOS:	OFF
PPPoE:	OFF
PPPoE User Name:	Blank
PPPoE Password:	Blank
Fixed IP for PPPoE:	OFF
Fixed IP Address for PPPoE:	Blank
PPPoE DNS:	Obtain automatically
Primary DNS:	Cannot be set.
Secondary DNS:	Cannot be set.

4. Confirm that the IP address is displayed in the launcher menu of teleconference terminal A.
   (Example: IP:192.100.10.10)
5. Enter LAN in the phone book of teleconference terminal A for a line I/F, the IP address of
   teleconference terminal B in it for an IP address, and other required items. After that, register
   teleconference terminal B in the phone book and initiate a call. Or set LAN for a line I/F and the IP
   address of teleconference terminal B for an IP address by Dial, and then initiate a call.

3-4. Connection via Gatekeeper

Example of system

When a call is initiated from teleconference terminal A to teleconference terminal B.

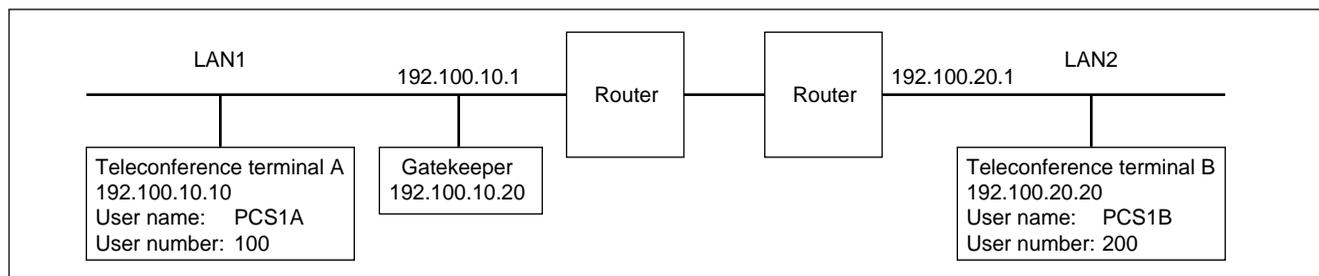1. The LAN setup menu of teleconference terminal B is set as described below.

DHCP Mode:	OFF
Host Name:	Enter any name.
IP Address:	Local IP address (192.100.20.20)
Network Mask:	Depends on a network. Usually, set to 255.255.255.0.
Gateway Address:	192.100.20.1
DNS Address:	Blank
Gatekeeper Mode:	ON
Gatekeeper Address:	192.100.10.20
User Alias:	Enter any name. (Example: PCS1B)
User Number:	Enter any number. (Example: 200)
SNMP Mode:	OFF
Trap Destination:	Blank
Community:	public
Description:	Videoconference Device
Location:	Blank
Contact:	Blank
NAT Mode:	OFF
NAT Address:	Blank
Packet Resend Request:	Blank
Adaptive Rate Control:	OFF (Set to ON when a packet loss occurs frequently.)
LAN Mode:	Auto Nagotiation (This mode is changed to a proper mode when mismatching occurs in the mode. Refer to "4-2. PCS-1/1P and Hub setting".)
Port Number Used:	Default (Set to "Custom" when a port number is specified by the network administrator.)
TCP Port Number:	2253 (Enter the port number specified by the network administrator when the port number used is set to "Custom".)
UDP Port Number:	49152 (Enter the port number specified by the network administrator when the port number used is set to "Custom".)
TOS:	OFF
PPPoE:	OFF
PPPoE User Name:	Blank
PPPoE Password:	Blank
Fixed IP for PPPoE:	OFF
Fixed IP Address for PPPoE: Blank	
PPPoE DNS:	Obtain automatically
Primary DNS:	Cannot be set.
Secondary DNS:	Cannot be set.

2. Confirm that the IP address displayed in the launcher menu of teleconference terminal B is 192.100.20.20.
3. Confirm that "Registration Confirm" is displayed at the bottom of page 2 in the LAN setup menu of teleconference terminal B.
4. The LAN setup menu of teleconference terminal A is set as described below.

DHCP Mode:	OFF
Host Name:	Enter any name.
IP Address:	Local IP address (192.100.10.10)
Network Mask:	Depends on a network. Usually, set to 255.255.255.0.
Gateway Address:	192.100.10.1
DNS Address:	Blank
Gatekeeper Mode:	ON
Gatekeeper Address:	192.100.10.20
User Alias:	Enter any name. (Example: PCS1A)
User Number:	Enter any number. (Example: 100)
SNMP Mode:	OFF
Trap Destination:	Blank
Community:	public
Description:	Videoconference Device
Location:	Blank
Contact:	Blank
NAT Mode:	OFF
NAT Address:	Blank
Packet Resend Request:	Blank
Adaptive Rate Control:	OFF (Set to ON when a packet loss occurs frequently.)
LAN Mode:	Auto Nagotiation (This mode is changed to a proper mode when mismatching occurs in the mode. Refer to "4-2. PCS-1/1P and Hub setting".)
Port Number Used:	Default (Set to "Custom" when a port number is specified by the network administrator.)
TCP Port Number:	2253 (Enter the port number specified by the network administrator when the port number used is set to "Custom".)
UDP Port Number:	49152 (Enter the port number specified by the network administrator when the port number used is set to "Custom".)
TOS:	OFF
PPPoE:	OFF
PPPoE User Name:	Blank
PPPoE Password:	Blank
Fixed IP for PPPoE:	OFF
Fixed IP Address for PPPoE: Blank	
PPPoE DNS:	Obtain automatically
Primary DNS:	Cannot be set.
Secondary DNS:	Cannot be set.

5. Confirm that the IP address displayed in the launcher menu of teleconference terminal A is 192.100.10.10.
6. Confirm that "Registration Confirm" is displayed at the bottom of page 2 in the LAN setup menu of teleconference terminal A.
7. Enter LAN in the dial list of teleconference terminal A for a line I/F, user name PCS1B or user number 200 of teleconference terminal B in it for an IP address, and other required items. After that, register teleconference terminal B and initiate a call. Or set LAN for a line I/F and user name PCS1B or user number 200 of teleconference terminal B for an IP address by Dial, and then initiate a call.

3-5. Connection via DHCP and Gatekeeper

Example of system

When a call is initiated from teleconference terminal A to teleconference terminal B.

1. The LAN setup menu of teleconference terminal B is set as described below.
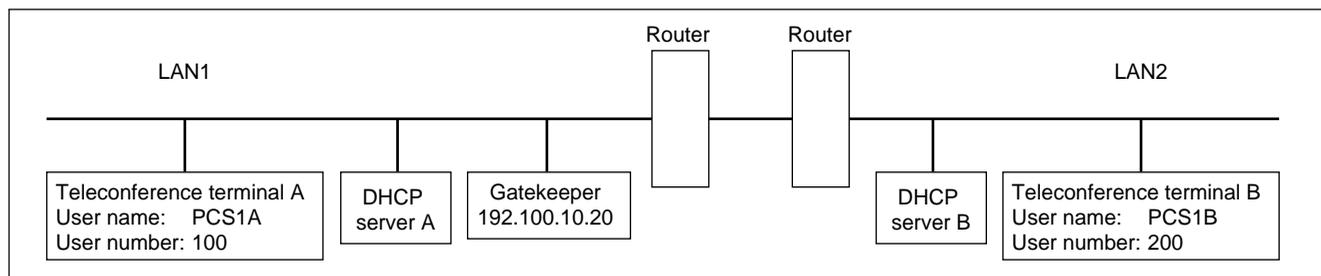
DHCP Mode:	ON
Host Name:	Enter any name.
IP Address:	Blank (Cannot be set.)
Network Mask:	Blank (Cannot be set.)
Gateway Address:	Blank (Cannot be set.)
DNS Address:	Blank (Cannot be set.)
Gatekeeper Mode:	ON
Gatekeeper Address:	192.100.10.20
User Alias:	Enter any name. (Example: PCS1B)
User Number:	Enter any number. (Example: 200)
SNMP Mode:	OFF
Trap Destination:	Blank
Community:	public
Description:	Videoconference Device
Location:	Blank
Contact:	Blank
NAT Mode:	OFF
NAT Address:	Blank
Packet Resend Request:	Blank
Adaptive Rate Control:	OFF (Set to ON when a packet loss occurs frequently.)
LAN Mode:	Auto Nagotiation (This mode is changed to a proper mode when mismatching occurs in the mode. Refer to "4-2. PCS-1/1P and Hub setting".)
Port Number Used:	Default (Set to "Custom" when a port number is specified by the network administrator.)
TCP Port Number:	2253 (Enter the port number specified by the network administrator when the port number used is set to "Custom".)
UDP Port Number:	49152 (Enter the port number specified by the network administrator when the port number used is set to "Custom".)
TOS:	OFF
PPPoE:	OFF
PPPoE User Name:	Blank
PPPoE Password:	Blank
Fixed IP for PPPoE:	OFF
Fixed IP Address for PPPoE: Blank	
PPPoE DNS:	Obtain automatically
Primary DNS:	Cannot be set.
Secondary DNS:	Cannot be set.

2. Confirm that the IP address is displayed in the launcher menu of teleconference terminal B. (Example: IP:192.100.20.20)

3. Confirm that "Registration Confirm" is displayed at the bottom of page 2 in the LAN setup menu of teleconference terminal B.

4. The LAN setup menu of teleconference terminal A is set as described below.

DHCP Mode:	ON
Host Name:	Enter any name.
IP Address:	Blank
Network Mask:	Blank.
Gateway Address:	Blank
DNS Address:	Blank
Gatekeeper Mode:	ON
Gatekeeper Address:	192.100.10.20
User Alias:	Enter any name. (Example: PCS1A)
User Number:	Enter any number. (Example: 100)
SNMP Mode:	OFF
Trap Destination:	Blank
Community:	public
Description:	Videoconference Device
Location:	Blank
Contact:	Blank
NAT Mode:	OFF
NAT Address:	Blank
Packet Resend Request:	Blank
Adaptive Rate Control:	OFF (Set to ON when a packet loss occurs frequently.)
LAN Mode:	Auto Nagotiation (This mode is changed to a proper mode when mismatching occurs in the mode. Refer to "4-2. PCS-1/1P and Hub setting".)
Port Number Used:	Default (Set to "Custom" when a port number is specified by the network administrator.)
TCP Port Number:	2253 (Enter the port number specified by the network administrator when the port number used is set to "Custom".)
UDP Port Number:	49152 (Enter the port number specified by the network administrator when the port number used is set to "Custom".)
TOS:	OFF
PPPoE:	OFF
PPPoE User Name:	Blank
PPPoE Password:	Blank
Fixed IP for PPPoE:	OFF
Fixed IP Address for PPPoE:	Blank
PPPoE DNS:	Obtain automatically
Primary DNS:	Cannot be set.
Secondary DNS:	Cannot be set.

5. Confirm that the IP address is displayed in the launcher menu of teleconference terminal A. (Example: IP:192.100.10.10)

6. Confirm that "Registration Confirm" is displayed at the bottom of page 2 in the LAN setup menu of teleconference terminal A.

7. Enter LAN in the dial list of teleconference terminal A for a line I/F, user name PCS1B or user number 200 of teleconference terminal B in it for an IP address, and other required items. After that, register teleconference terminal B and initiate a call. Or set LAN for a line I/F and user name PCS1B or user number 200 of teleconference terminal B for an IP address by Dial, and then initiate a call.

3-6. Connection beyond NAT

Example of system
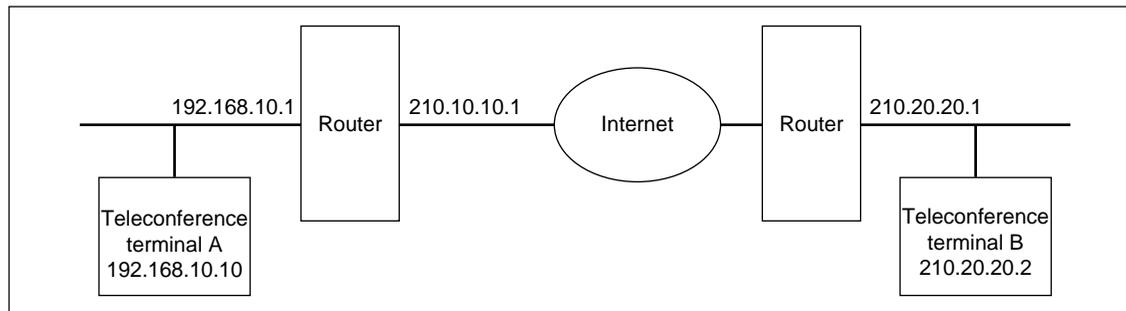
A call is submitted from TV conference terminal A (NAT environment) to TV conference terminal B (global IP). (It cannot be usually submitted from TV conference terminal B to TV conference terminal A.)

1. The LAN setup menu of teleconference terminal B is set as described below.

DHCP Mode:	OFF
Host Name:	Enter any name.
IP Address:	Local IP address (210.20.20.2)
Network Mask:	Depends on the network. 255.255.255.248 for fixed IP8.
Gateway Address:	210.20.20.1
DNS Address:	Blank
Gatekeeper Mode:	OFF
Gatekeeper Address:	Blank
User Alias:	Blank
User Number:	Blank
SNMP Mode:	OFF
Trap Destination:	Blank
Community:	public
Description:	Videoconference Device
Location:	Blank
Contact:	Blank
NAT Mode:	OFF
NAT Address:	Blank
Packet Resend Request:	ON
Adaptive Rate Control:	ON
LAN Mode:	Auto Nagotiation (This mode is changed to a proper mode when mismatching occurs in the mode. Refer to "4-2. PCS-1/1P and Hub setting".)
Port Number Used:	Default (Set to "Custom" when a port number is specified by the network administrator.)
TCP Port Number:	2253 (Enter the port number specified by the network administrator when the port number used is set to "Custom".)
UDP Port Number:	49152 (Enter the port number specified by the network administrator when the port number used is set to "Custom".)
TOS:	OFF
PPPoE:	OFF
PPPoE User Name:	Blank
PPPoE Password:	Blank
Fixed IP for PPPoE:	OFF

Fixed IP Address for PPPoE: Blank

PPPoE DNS:	Obtain automatically
Primary DNS:	Cannot be set.
Secondary DNS:	Cannot be set.

2. Confirm that the IP address displayed in the launcher menu of teleconference terminal B is 210.20.20.2.

3. The LAN setup menu of teleconference terminal A is set as described below.

DHCP Mode:	Off (Set to "Auto" when a router has a DHCP server function. Setting is not required from "IP address" to "DNS address" when "Auto" is set.
Host Name:	Enter any name.
IP Address:	Local IP address (192.168.10.10)
Network Mask:	255.255.255.0.
Gateway Address:	192.168.10.1
DNS Address:	Blank
Gatekeeper Mode:	OFF
Gatekeeper Address:	Blank
User Alias:	Blank
User Number:	Blank
SNMP Mode:	OFF
Trap Destination:	Blank
Community:	public
Description:	Videoconference Device
Location:	Blank
Contact:	Blank
NAT Mode:	ON
NAT Address:	210.10.10.1
Packet Resend Request:	ON
Adaptive Rate Control:	ON
LAN Mode:	Auto Nagotiation (This mode is changed to a proper mode when mismatching occurs in the mode. Refer to "4-2. PCS-1/1P and Hub setting".)
Port Number Used:	Default (Set to "Custom" when a port number is specified by the network administrator.)
TCP Port Number:	2253 (Enter the port number specified by the network administrator when the port number used is set to "Custom".)
UDP Port Number:	49152 (Enter the port number specified by the network administrator when the port number used is set to "Custom".)
TOS:	OFF
PPPoE:	OFF
PPPoE User Name:	Blank
PPPoE Password:	Blank
Fixed IP for PPPoE:	OFF

Fixed IP Address for PPPoE: Blank

PPPoE DNS:	Obtain automatically
Primary DNS:	Cannot be set.
Secondary DNS:	Cannot be set.

4. Confirm that the IP address displayed in the launcher menu of teleconference terminal A is 192.168.10.10.

5. Enter LAN in the phone book of teleconference terminal A for a line I/F, IP address 210.20.20.2 of teleconference terminal B in it for an IP address, and other required items. After that, register teleconference terminal B in the phone book and initiate a call. Or set LAN for a line I/F and IP address 210.20.20.2 of teleconference terminal B for an IP address by Dial, and then initiate a call.

3-7. Connection using PPPoE

Example of system

When a call is initiated from teleconference terminal A to teleconference terminal B.

1. The LAN setup menu of teleconference terminal B is set as described below.

DHCP Mode:	OFF
Host Name:	Blank
IP Address:	Blank
Network Mask:	Blank
Gateway Address:	Blank
DNS Address:	Blank
Gatekeeper Mode:	OFF
Gatekeeper Address:	Blank
User Alias:	Blank
User Number:	Blank
SNMP Mode:	OFF
Trap Destination:	Blank
Community:	public
Description:	Videoconference Device
Location:	Blank
Contact:	Blank
NAT Mode:	OFF
NAT Address:	Blank
Packet Resend Request:	ON
Adaptive Rate Control:	ON
LAN Mode:	Auto Nagotiation (This mode is changed to a proper mode when mismatching occurs in the mode. Refer to "4-2. PCS-1/1P and Hub setting".)
Port Number Used:	Default
TCP Port Number:	2253
UDP Port Number:	49152
TOS:	OFF
PPPoE:	ON
PPPoE User Name:	User (account) name acquired from a provider
PPPoE Password:	Password acquired from a provider
Fixed IP for PPPoE:	On (When fixed IP is acquired)
Fixed IP Address for PPPoE: 211.10.10.10	
PPPoE DNS:	Obtain automatically (Acquired from a provider. Select "Set" when the fixed DNS server address is specified. Enter the addresses specified from a provider in "Primary DNS" and "Secondary DNS", respectively.)

Primary DNS: Cannot be set.
Secondary DNS: Cannot be set.

2. Confirm that the IP address displayed in the launcher menu of teleconference terminal B is
    211.10.10.10.

3. The LAN setup menu of teleconference terminal A is set as described below.

DHCP Mode: OFF
Host Name: Blank
IP Address: Blank
Network Mask: Blank
Gateway Address: Blank
DNS Address: Blank
Gatekeeper Mode: OFF
Gatekeeper Address: Blank
User Alias: Blank
User Number: Blank
SNMP Mode: OFF
Trap Destination: Blank
Community: public
Description: Videoconference Device
Location: Blank
Contact: Blank
NAT Mode: OFF
NAT Address: Blank
Packet Resend Request: ON
Adaptive Rate Control: ON
LAN Mode: Auto Nagotiation (This mode is changed to a proper mode when mismatching
                             occurs in the mode. Refer to "4-2. PCS-1/1P and Hub setting".)
Port Number Used: Default
TCP Port Number: 2253
UDP Port Number: 49152
TOS: OFF
PPPoE: ON
PPPoE User Name: User (account) name acquired from a provider
PPPoE Password: Password acquired from a provider
Fixed IP for PPPoE: On (When fixed IP is acquired)
Fixed IP Address for PPPoE: 210.10.10.10
PPPoE DNS: Obtain automatically (Acquired from a provider. Select "Set" when the
                             fixed DNS server address is specified. Enter the addresses specified from a
                             provider in "Primary DNS" and "Secondary DNS", respectively.)
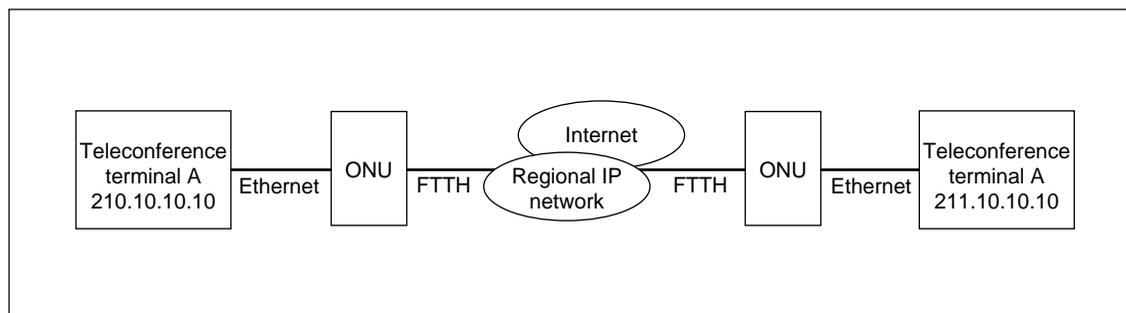Primary DNS: Cannot be set.
Secondary DNS: Cannot be set.

4. Confirm that the IP address displayed in the launcher menu of teleconference terminal A is
    210.10.10.10.

5. Enter LAN in the phone book of teleconference terminal A for a line I/F, IP address 211.10.10.10 of
    teleconference terminal B in it for an IP address, and other required items. After that, register
    teleconference terminal B in the phone book and initiate a call. Or set LAN for a line I/F and IP
    address 211.10.10.10 of teleconference terminal B for an IP address by Dial, and then initiate a call.

Section 4
Technical Data

4-1. PCS-1/1P Port Number Used

4-1-1. During P-P Connection (Default)

PCS-1/1P uses the port number below during P-P connection when the port number used in a LAN setup menu is set as "Default".

	Port number
RAS (PCS-1/1P)	Any number from 2253 to 2255∗ (when Gatekeeper is used)
RAS (Gatekeeper)	1718 or 1719 (when Gatekeeper is used)
Q.931 (Dialing)	Any number from 2253 to 2255∗
Q.931 (Answering)	1720
H.245	Any number from 2253 to 2255∗
Audio RTP	49152
Audio RTCP	49153
Video RTP	49154
Video RTCP	49155
FECC RTP	49156
FECC RTCP	49157
Data conference RTP	49158
Data conference RTCP	49159

∗: Ver.2.20 to 2.32: 2253 to 2303

4-1-2. P-P Connection (Custom: When TCP port number is set to 3000 and UDP port number is set to 3100)

The port number that PCS-1/1P uses is determined by the value input to TCP and UDP port numbers when the port number used in a LAN setup menu is set as "Custom". For example, PCS-1/1P uses the port number below during P-P connection when a TCP port number is set to 3000 and when an UDP port number is set to 3100.

	Port number
RAS (PCS-1/1P)	Any number from 3000 to 3002∗ (when Gatekeeper is used)
RAS (Gatekeeper)	1718 or 1719 (when Gatekeeper is used)
Q.931 (Dialing)	Any number from 3000 to 3002∗
Q.931 (Answering)	1720
H.245	Any number from 3000 to 3002∗
Audio RTP	3100
Audio RTCP	3101
Video RTP	3102
Video RTCP	3103
FECC RTP	3104
FECC RTCP	3105
Data conference RTP	3106
Data conference RTCP	3107

∗: Ver.2.20 to 2.32: 3000 to 3050

4-1-3. During Use of Internal MCU Function (Default)

PCS-1/1P that operates as internal MCU uses the port number below when the port number used in a LAN setup menu is set as "Default". The port number that a child-terminal uses is the same as during P-P connection.

	Port number (at first point)	Port number (at N'th point)
RAS (PCS-1/1P)	Any number from 2253 to 2263* (when Gatekeeper is used)	Any number from 2253 to 2263* (when Gatekeeper is used)
RAS (Gatekeeper)	1718 or 1719 (when Gatekeeper is used)	1718 or 1719 (when Gatekeeper is used)
Q931 (Dialing)	Any number from 2253 to 2263*	Any number from 2253 to 2263*
Q931 (Answering)	1720	1720
H.245	Any number from 2253 to 2263*	Any number from 2253 to 2263*
Audio RTP	49152	49152+20 × (N−1)
Audio RTCP	49153	49153+20 × (N−1)
Video RTP	49154	49154+20 × (N−1)
Video RTCP	49155	49155+20 × (N−1)
FECC RTP	49156	49156+20 × (N−1)
FECC RTCP	49157	49157+20 × (N−1)
Data conference RTP	49158	49158+20 × (N−1)
Data conference RTCP	49159	49159+20 × (N−1)

∗: Ver.2.20 to 2.32: 2253 to 2303

4-1-4. During Use of Internal MCU Function (Custom: When TCP port number is set to 3000 and when UDP port number is set to 3100)

The port number that PCS-1/1P uses is determined by the value input to TCP and UDP port numbers when the port number used in a LAN setup menu is set as "Custom". For example, PCS-1/1P that operates as internal MCU uses the port number below during opposed connection when a TCP port number is set to 3000 and when an UDP port number is set to 3100. The port number that a child-terminal uses is the same as during opposed connection.

	Port number (at first point)	Port number (at N'th point)
RAS (PCS-1/1P)	Any number from 3000 to 3010* (when Gatekeeper is used)	Any number from 3000 to 3010* (when Gatekeeper is used)
RAS (Gatekeeper)	1718 or 1719 (when Gatekeeper is used)	1718 or 1719 (when Gatekeeper is used)
Q931 (Dialing)	Any number from 3000 to 3010*	Any number from 3000 to 3010*
Q931 (Answering)	1720	1720
H.245	Any number from 3000 to 3010*	Any number from 3000 to 3010*
Audio RTP	3100	3100+20 × (N−1)
Audio RTCP	3101	3101+20 × (N−1)
Video RTP	3102	3102+20 × (N−1)
Video RTCP	3103	3103+20 × (N−1)
FECC RTP	3104	3104+20 × (N−1)
FECC RTCP	3105	3105+20 × (N−1)
Data conference RTP	3106	3106+20 × (N−1)
Data conference RTCP	3107	3107+20 × (N−1)

∗: Ver.2.20 to 2.32: 3000 to 3050

4-2. Setting of PCS-1/1P and HUB

The initial setting of the PCS-1/1P is Auto.

In the Auto setting of the PCS-1/1P, 10/100 can be selected automatically, however, Half/Full cannot be selected automatically. Therefore, if the HUB is set to Full mode, a connection failure or packet loss occurs. The following table shows an example of connection between the PCS-1/1P and Catalyst 2950. When the HUB is set to 100FULL or 10FULL, change the setting of HUB or adjust the PCS-1/1P setting to HUB. Refer to Operating Instructions.

Table of connection between PCS-1/1P and Catalyst 2950

PCS-1/1P setting 2950 setting	AUTO	100FULL	100HALF	10FULL	10HALF
AUTO	OK	Packet loss	OK	Packet loss	OK
100FULL	Packet loss	OK	Packet loss	Connection failure	Connection failure
100HALF	OK	Packet loss	OK	Connection failure	Connection failure
10FULL	Packet loss	Connection failure	Connection failure	OK	Packet loss
10HALF	OK	Connection failure	Connection failure	Packet loss	OK

4-3. Audio and Video Input/Output Characteristics

4-3-1. Audio input/output characteristics of PCS-1/1P

Name	Connector	Impedance	Input/output level	Remarks
MIC1/MIC2 (Input)	Mini-jack	4.7 kΩ (Plug in power)	The reference value of an input level is −55 dBs.	
AUDIO IN (Input)	Pin jack	47 kΩ or higher, Unbalanced	The reference value of an input level is −9 dBs.	
AUDIO OUT (Output)	Pin jack	1 kΩ or less, Unbalanced	Reference value −12 dBs	
AUDIO OUT (MIXED) (Output)	Pin jack	1 kΩ or less, Unbalanced	Reference value −12 dBs	

4-3-2. Video input/output characteristics of PCS-1/1P

Name	Connector	Specifications	Remarks
VIDEO IN AUX1 (Input)	Mini DIN 4-pin	S video input signal Y signal: 0.7 V p-p/75 Ω C signal: 0.3 V p-p/75 Ω	PCS-1: NTSC PCS-1P: PAL
VIDEO IN AUX2 (Input)	Pin jack	Composite input signal 1 V p-p/75 Ω	PCS-1: NTSC PCS-1P: PAL
VIDEO OUT AUX (Output)	Pin jack	Composite output signal 1 V p-p/75 Ω	PCS-1: NTSC PCS-1P: PAL
VIDEO OUT MONITOR MAIN (Output)	Mini DIN 4-pin	S video output signal Y signal: 0.7 V p-p/75 Ω C signal: 0.3 V p-p/75 Ω	PCS-1: NTSC PCS-1P: PAL
VIDEO OUT MONITOR SUB (Output)	Mini DIN 4-pin	S video output signal Y signal: 0.7 V p-p/75 Ω C signal: 0.3 V p-p/75 Ω	PCS-1: NTSC PCS-1P: PAL
RGB OUT (Output)	D-Sub 15-pin	RGB video output (H/V/R/G/B: 0.7 V p-p/75 Ω)	

4-4. Audio Selection List of PCS-1/1P

Audio setup menu				Audio input			Audio output		Receiving volume adjustment	Remarks
CTE	Input select	MIC select	Echo canceller	Selection input	Internal echo canceller	MIC mute	AUDIO DSB AUX OUT DSB LINE	AUDIO OUT (MIXED)		
Off	MIC	Internal	Internal	Internal MIC	Valid	Valid	Remote	Remote + Internal MIC	Valid	Recommended during use of an internal microphone.
			External	AUX	Invalid	Invalid	Remote	Remote + AUX	Invalid	
		External	Internal	MIC	Valid	Valid	Remote	Remote + MIC	Valid	Recommended when PCS-A1/A300 is connected to the microphone of the main unit.
			External	AUX	Invalid	Invalid	Remote	Remote + AUX	Invalid	
		DSB MIC	Internal	DSB MIC	Valid	Valid	Remote	Remote + DSB MIC	Valid	Recommended when PCS-A1/A300 is connected to DSB MIC.
			External	AUX	Invalid	Invalid	Remote	Remote + AUX	Invalid	
	AUX	Internal	Internal	AUX	Invalid	Invalid	Remote + AUX	Invalid	Valid	
			External	AUX	Invalid	Invalid	Remote	Remote + AUX	Invalid	Recommended when an echo canceller is used.
		External	Internal	AUX	Invalid	Invalid	Remote + AUX	Remote + AUX	Valid	
			External	AUX	Invalid	Invalid	Remote	Remote + AUX	Invalid	Recommended when an echo canceller is used.
		DSB MIC	Internal	None	–	–	Remote	Remote	Valid	
			External	None	–	–	Remote	Remote	Invalid	
	MIC + AUX	Internal	Internal	Internal MIC + AUX	Internal MIC valid	Internal MIC valid	Remote + AUX	Remote + Internal MIC + AUX	Valid	
			External	AUX	Invalid	Invalid	Remote	Remote + AUX	Invalid	
		External	Internal	MIC + AUX	MIC valid	MIC valid	Remote + AUX	Remote + MIC of main unit + AUX	Valid	
			External	AUX	Invalid	Invalid	Remote	Remote + AUX	Invalid	
		DSB MIC	Internal	DSB MIC + AUX	DSB MIC valid	DSB MIC valid	Remote + AUX	Remote + DSB MIC + AUX	Valid	
			External	AUX	Invalid	Invalid	Remote	Remote + AUX	Invalid	

Audio setup menu				Audio input			Audio output			Remarks
CTE	Input select	MIC select	Echo canceller	Selection input	Internal echo canceller	MIC mute	AUDIO DSB AUX OUT DSB LINE	AUDIO OUT (MIXED)	Receiving volume adjustment	
AUX	AUX	Internal	External	AUX	Invalid	Invalid	Remote	Remote + AUX	Invalid	Recommended during use of CTE. (Connected to the main unit.)
DSB AUX IN	MIC	DSB AUX IN	External	DSB AUX	Invalid	Valid	Remote	Remote + DSB AUX	Valid	Recommended during use of CTE. (Connected to DSB.)

Audio input
• Internal MIC: Microphone incorporated into the man unit
• MIC: MIC input of main unit
• AUX: AUX input of main unit
• DSB MIC: MIC input of DSB
• DSB AUX: AUX input of DSB

Audio output
• Remote: Remote audio
• MIC: MIC input of main unit
• AUX: AUX input of main unit
• DSB MIC: MIC input of DSB
• DSB AUX: AUX input of DSB

Notes

• For AUDIO OUT (MIX), the receiving volume cannot be adjusted.
• The setting of a receiving volume is fixed when CTE is connected to the main unit.
  However, it can be adjusted when CTE is connected to DSB.

4-5. Remote Motion Picture Display during Multipoint Connection of PCS-1/1P

4-5-1. Remote Motion Picture Displayed at Each Point in Audio Detection Mode

The whole screen at a speaking point is displayed in other terminals. The remote motion picture displayed at a speaking point remains before speaking. Examples at six points are given below.
(Note: Sub-devices A to E are the order of connection.)

Operation order	Operation	Main device	Sub-device A	Sub-device B	Sub-device C	Sub-device D	Sub-device E
1	Just after connection	Whole screen of A	Whole screen of main device	Whole screen of main device	Whole screen of main device	Whole screen of main device	Whole screen of main device
2	Spoken by A	Whole screen of A	Whole screen of main device	Whole screen of A	Whole screen of A	Whole screen of A	Whole screen of A
3	Spoken by B	Whole screen of B	Whole screen of B	Whole screen of A	Whole screen of B	Whole screen of B	Whole screen of B
4	Spoken by C	Whole screen of C	Whole screen of C	Whole screen of C	Whole screen of B	Whole screen of C	Whole screen of C

4-5-2. Remote Motion Picture at Each Point in Broadcast Selection Mode

The whole screen of the terminal at which the "Broadcast the local side" button was pressed is displayed in other terminals. A main point is displayed in the terminal at which the "Broadcast the local side" button was pressed. A main point is displayed in the terminal at which the "Broadcast the local side" button was pressed. The whole screen of the broadcast-selected terminal is displayed in other terminals when "Broadcast sub-device A" to "Broadcast sub-device E" or "Broadcast the local side" are selected in a main device. A main point is displayed in the broadcast-selected terminal. When the "Broadcast end" button is pressed in a terminal or main terminal during broadcasting, the split screen is displayed if splitting is selected in the multipoint menu of the main terminal. If audio detection is selected in the multipoint menu of the main terminal, a main point is displayed in a sub-terminal and the terminal point during broadcast is displayed in a main terminal. Examples at six points when audio detection is selected in the multipoint menu of a main device are given below.
(Note: Sub-devices A to E are the order of connection.)

Operation order	Operation	Main device	Sub-device A	Sub-device B	Sub-device C	Sub-device D	Sub-device E
1	Just after connection	Whole screen of A	Whole screen of main device	Whole screen of main device	Whole screen of main device	Whole screen of main device	Whole screen of main device
2	Broadcast A	Whole screen of A	Whole screen of main device	Whole screen of A	Whole screen of A	Whole screen of A	Whole screen of A
3	Broadcast end	Whole screen of A	Whole screen of main device	Whole screen of main device	Whole screen of main device	Whole screen of main device	Whole screen of main device
4	Broadcast B	Whole screen of B	Whole screen of B	Whole screen of main device	Whole screen of B	Whole screen of B	Whole screen of B
5	Broadcast end	Whole screen of B	Whole screen of main device	Whole screen of main device	Whole screen of main device	Whole screen of main device	Whole screen of main device
6	Broadcast C	Whole screen of C	Whole screen of C	Whole screen of C	Whole screen of main device	Whole screen of C	Whole screen of C

4-5-3. Remote Motion Picture at Each Point in Split Mode

The images in all connected terminals are split and simultaneously displayed in all terminals.

1. The number of split images is 4 when sub-terminals are 1 to 3. The position of the images is fixed in the order of connection. Examples at four points are given below.
    (Note: Sub-devices A to C are the order of connection.)

    Remote image in main and sub-terminals
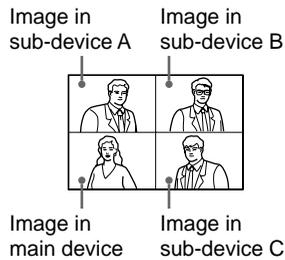
2. The number of split images is 6 when sub-terminals are 4 and 5. The position of the images is fixed in the order of connection immediately after connection.
    (Note: Sub-devices A to E are the order of connection.)

    Remote image in main and sub-terminals immediately after connection
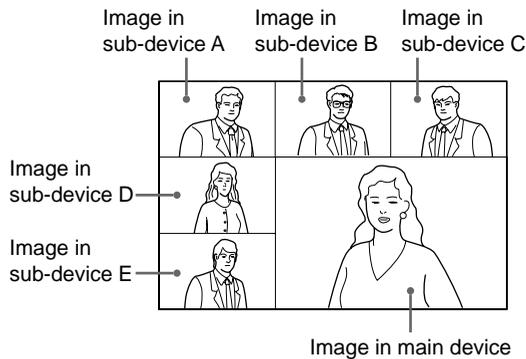
3. The image of a speaker moves to the lower-right position when he or she speaks during six-image splitting.
    The image in a main terminal moves to the speaker terminal position when the previous image displayed in the lower-right position is one in the main terminal.
    When the previous image displayed in the lower-right position is one in a sub-terminal, it returns to the position immediately after connection. The image in a main terminal moves to the speaker terminal position. Instead, the image in a main terminal moves to the speaker terminal position.

The transition examples of an image when the previous image displayed in the lower-right position is one in a main terminal and when sub-terminal B speaks are given below.

Spoken by main terminal
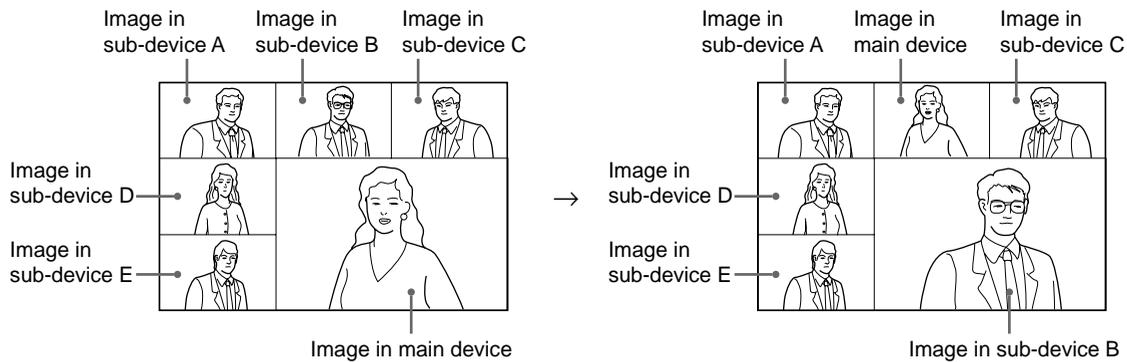
Image in sub-device A Image in sub-device B Image in sub-device C

Image in sub-device D

Image in sub-device E

Image in main device

→

Image in sub-device A Image in main device Image in sub-device C

Image in sub-device D

Image in sub-device E

Image in sub-device B

The transition examples of an image when the previous image displayed in the lower-right position is one in sub-terminal B and when sub-terminal D speaks are given below.

Spoken by sub-terminal B

Image in sub-device A Image in main device Image in sub-device C

Image in sub-device D

Image in sub-device E

Image in sub-device B

→

Image in sub-device A Image in sub-device B Image in sub-device C

Image in main device

Image in sub-device E

Image in sub-device D
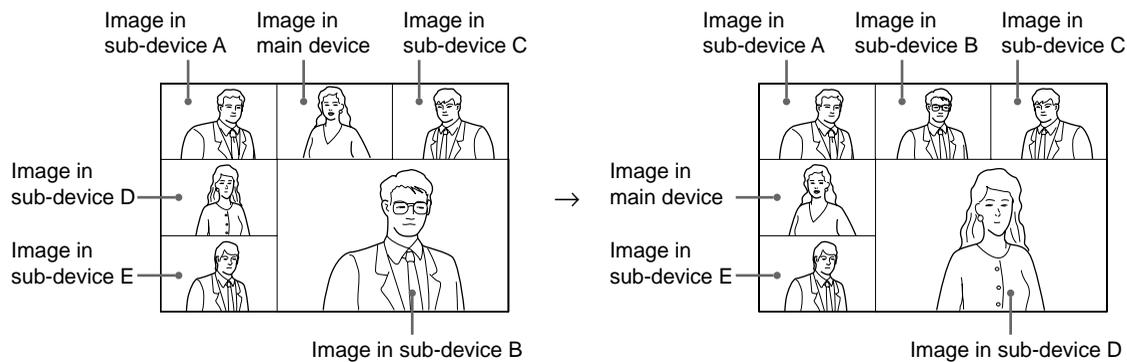
4. The splitting position can be fixed during six-image splitting. When "splitting (Fix A)" to "splitting (Fix E)" or "Splitting (Fix the local side)" is selected in a main terminal, the image in the selected terminal moves to the lower-right position and the image in a main terminal moves to the position of the selected terminal.
The examples when "splitting (Fix E)" is selected after "splitting (Fix C)" is selected in a main terminal are given below.

Selection of splitting (Fix C)

Image in sub-device A Image in sub-device B Image in main device

Image in sub-device D

Image in sub-device E

Image in sub-device C

→

Selection of splitting (Fix C)

Image in sub-device A Image in sub-device B Image in sub-device C

Image in sub-device D

Image in main device

Image in sub-device D
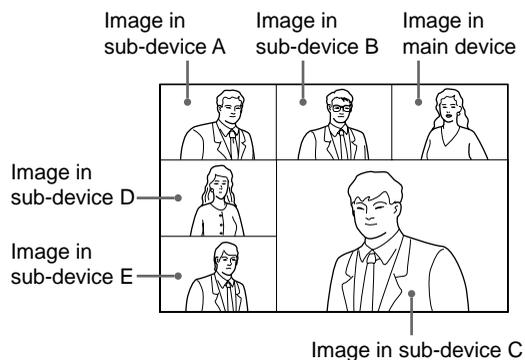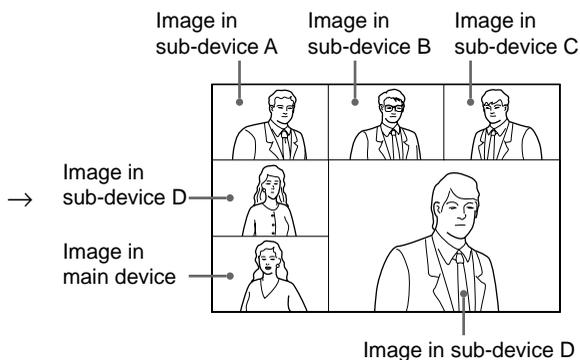
4-6. Display Transition List of PCS-1/1P

General setup
Dual monitor: Off
Monitor output: VIDEO OUT
In this case, connect a video monitor to the VIDEO OUT MAIN terminal of the main unit. The display
transition is as shown below.

Transition state	VIDEO OUT MAIN image of main unit
Non-communication	Launcher menu
Motion picture communication	Remote motion picture (Sub-screen: Local motion picture)
One shot/continuous still picture transmission	Still picture (4CIF resolution)
DSB transmission	Remote motion picture (Sub-screen: Local motion picture)
One shot/continuous still picture reception	Still picture (4CIF resolution)
DSB reception	Still picture (4CIF resolution)

General setup
Dual monitor: Off
Monitor output: RGB OUT
In this case, connect an RGB monitor to the RGB terminal of the main unit. The display transition is as
shown below.

Transition state	RGB image of main unit
Non-communication	Launcher menu
Motion picture communication	Remote motion picture (Sub-screen: Local motion picture)
One shot/continuous still picture transmission	Still picture (4CIF resolution)
DSB transmission	Remote motion picture (Sub-screen: Local motion picture)
One shot/continuous still picture reception	Still picture (4CIF resolution)
DSB reception	Still picture (XGA resolution)

General setup
Dual monitor: On
Monitor output: VIDEO OUT
In this case, connect a video monitor to the VIDEO OUT MAIN/VIDEO OUT SUB terminal of the main
unit. The display transition is as shown below.

Transition state	VIDEO OUT MAIN image of main unit	VIDEO OUT SUB image of main unit
Non-communication	Launcher menu	Local motion picture
Motion picture communication	Remote motion picture (Sub-screen: Local motion picture)	Local motion picture
One shot/continuous still picture transmission	Remote motion picture (Sub-screen: Local motion picture)	Still picture (4CIF resolution)
DSB transmission	Remote motion picture (Sub-screen: Local motion picture)	Local motion picture
One shot/continuous still picture reception	Remote motion picture (Sub-screen: Local motion picture)	Still picture (4CIF resolution)
continuous still picture reception	Still picture (4CIF resolution)	Still picture (4CIF resolution)
DSB reception	Remote motion picture (Sub-screen: Local motion picture)	Still picture (4CIF resolution)

General setup

Dual monitor: On

Monitor output: RGB OUT

In this case, connect a video monitor to the VIDEO OUT MAIN terminal of the main unit and connect an RGB monitor to the RGB terminal of the main unit. The display transition is as shown below.

Transition state	VIDEO OUT MAIN image of main unit	RGB image of main unit
Non-communication	Launcher menu	Local motion picture
Motion picture communication	Remote motion picture (Sub-screen: Local motion picture)	Local motion picture
One shot/continuous still picture transmission	Remote motion picture (Sub-screen: Local motion picture)	Still picture (4CIF resolution)
DSB transmission	Remote motion picture (Sub-screen: Local motion picture)	Local motion picture
One shot/continuous still picture reception	Remote motion picture (Sub-screen: Local motion picture)	Still picture (4CIF resolution)
continuous still picture reception	Still picture (4CIF resolution)	Still picture (4CIF resolution)
DSB reception	Remote motion picture (Sub-screen: Local motion picture)	Still picture (XGA resolution)

General setup

Dual monitor: On

Monitor output: RGB OUT (DSB)

In this case, connect a video monitor to the VIDEO OUT MAIN terminal of the main unit and connect an RGB monitor to the DSB RGB terminal. The display transition is as shown below.

Transition state	VIDEO OUT MAIN image of main unit	DSB RGB image
Non-communication	Launcher menu	Still picture (XGA resolution)
Motion picture communication	Remote motion picture (Sub-screen: Local motion picture)	Local motion picture
One shot/continuous still picture transmission	Remote motion picture (Sub-screen: Local motion picture)	Still picture (4CIF resolution)
DSB transmission	Remote motion picture (Sub-screen: Local motion picture)	Still picture (XGA resolution)
One shot/continuous still picture reception	Remote motion picture (Sub-screen: Local motion picture)	Still picture (4CIF resolution)
continuous still picture reception	Still picture (4CIF resolution)	Still picture (4CIF resolution)
DSB reception	Remote motion picture (Sub-screen: Local motion picture)	Still picture (XGA resolution)

4-7. Priority Level List of Video and Audio Codec

High-speed bit rate of H.323 (512 K or higher)

		1	2	3	4	5	6	7
Sound quality priority	V	H264/30 fps	MPEG4/30 fps	SIF/60 fps	G263/30 fps	H261/30 fps	–	–
	A	MPEG4 AAC	G722	G722.1	G711	G728	G729	G723.1
Picture quality priority	V	H264/30 fps	MPEG4/30 fps	SIF/60 fps	G263/30 fps	H261/30 fps	–	–
	A	G722	G722.1	G729	G723.1	G728	MPEG4 AAC	G711
Motion priority	V	SIF/60 fps	MPEG4/30 fps	H264	H263/30 fps	H261/30 fps	–	–
	A	G722	G722.1	G729	G723.1	G728	MPEG4 AAC	G711

Middle-speed bit rate of H.323 (256 K to 511 K)

		1	2	3	4	5	6	7
Sound quality priority	V	H264/15 fps	MPEG4/15 fps	H263/15 fps	H261/15 fps	–	–	–
	A	MPEG4 AAC	G722	G722.1	G711	G728	G729	G723.1
Picture quality priority	V	H264/15 fps	MPEG4/15 fps	H263/15 fps	H261/15 fps	–	–	–
	A	G722	G722.1	G729	G723.1	G728	MPEG4 AAC	G711
Motion priority	V	H264/30 fps	MPEG4/30 fps	H263/30 fps	H261/30 fps	–	–	–
	A	G722	G722.1	G729	G723.1	G728	MPEG4 AAC	G711

Low-speed bit rate of H.323 (Under 256 K)

		1	2	3	4	5	6	7
Sound quality priority	V	H264/15 fps	MPEG4/15 fps	H263/15 fps	H261/15 fps	–	–	–
	A	MPEG4 AAC	G722	G722.1	G711	G728	G729	G723.1
Picture quality priority	V	H264/15 fps	MPEG4/15 fps	H263/15 fps	H261/15 fps	–	–	–
	A	G722.1	G722.1	G723.1	G729	G728	MPEG4 AAC	G711
Motion priority	V	H264/30 fps	MPEG4/30 fps	H263/30 fps	H261/30 fps	–	–	–
	A	G722.1	G722	G723.1	G729	G728	MPEG4 AAC	G711

High-speed bit rate of H.320 (512 K or higher)

		1	2	3	4	5	6	7
Sound quality priority	V	H264/30 fps	H263/30 fps	H261/30 fps	–	–	–	–
	A	G722	G711	G728	–	–	–	–
Picture quality priority	V	H264/30 fps	H263/30 fps	H261/30 fps	–	–	–	–
	A	G722	G728	G711	–	–	–	–
Motion priority	V	H264/30 fps	H263/30 fps	H261/30 fps	–	–	–	–
	A	G722	G728	G711	–	–	–	–

Middle-speed bit rate of H.320 (256 K to 511 K)

		1	2	3	4	5	6	7
Sound quality priority	V	H264/15 fps	H263/15 fps	H261/15 fps	–	–	–	–
	A	G722	G711	G728	–	–	–	–
Picture quality priority	V	H264/15 fps	H263/15 fps	H261/15 fps	–	–	–	–
	A	G722	G728	G711	–	–	–	–
Motion priority	V	H264/30 fps	H263/30 fps	H261/30 fps	–	–	–	–
	A	G722	G728	G711	–	–	–	–

Low-speed bit rate of H.320 (Under 256 K)

		1	2	3	4	5	6	7
Sound quality priority	V	H264/15 fps	H263/15 fps	H261/15 fps	–	–	–	–
	A	G722	G711	G728	–	–	–	–
Picture quality priority	V	H264/15 fps	H263/15 fps	H261/15 fps	–	–	–	–
	A	G722	G728	G711	–	–	–	–
Motion priority	V	H264/30 fps	H263/30 fps	H261/30 fps	–	–	–	–
	A	G722	G728	G711	–	–	–	–

4-8. Conference Connection Format and Its Corresponding Usable Codec List

	H.323 opposed	H.320 opposed	H.323MCU	H.320MCU	MIX MCU	Cascade (Only LAN)	Cascade (Only LAN)
Video							
Interlaced SIF	○	–	–	–	–	–	–
H.264	○	○	–	–	–	–	–
MPEG4	○	–	–	–	–	–	–
H.263	○	○	○	○	○	○	○
H.261	○	○	○	○	○	○	○
Audio							
MPEG4 AAC	○	–	–	–	–	–	–
G.722.1	○	–	–	–	–	–	–
G.722	○	○	○	○	○	○	○
G.729	○	–	–	–	–	–	–
G.728	○	○	○	○	○	○	○
G.723.1	○	–	–	–	–	–	–
G.711	○	○	○	○	○	○	○